

FLIGHT

&
The AIRCRAFT
ENGINEER.

First Aero Weekly in the World.

Founder and Editor: STANLEY SPOONER

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CONTENTS

Editorial Comment :	PAGE
The Conquest of the Atlantic	791
Beware of Undue Optimism	792
The Dominions and the Air Service	792
The Scrapping of New Machines	792
The Air Ministry and its Cars	792
Aerial Service in South Africa	794
Wireless Progress	794
The Revival of Aerial Sport	794
The Victory Aerial Derby	796
Flight—and the Men : Maj.-Gen. Sir Hugh M. Trenchard	793
"A Bad Landing"	795
The Caproni Bombing Triplane	797
The Royal Aero Club: Official Notices	800
The Transatlantic Flight	801
The Victory Aerial Derby	806
The Independent Air Force	814
Airisms from the Four Winds	817
Flying at Hendon	819
Air Ministry Methods	821
Personals	822
Mentioned in Dispatches	823
British Air Services	824
British Imports and Exports	926

EDITORIAL COMMENT



It is with the profoundest satisfaction that we are able to record the fact that the first direct flight across the Atlantic has been accomplished by British aviators, flying a British machine, which is British in design and construction down to the last detail—not forgetting the engine. By their successful crossing of the wild Atlantic Capt. Alcock and Lieut. Brown have achieved a performance which will remain a landmark in history throughout the ages, and have placed to the credit of Britain and her sons a record second to none in the story of achievement by land, sea and air. For a parallel we have to go back to the days of the daring navigators of the Middle Ages, who

The Conquest of the Atlantic

ventured their lives in frail craft on the uncharted seas of the world, impelled by the thirst for discovery and by that subtle and indefinable desire to blaze out new trails which has created pioneers in every age.

In paying tribute to the wonderful performance of Alcock and Brown, we do not discount for a moment the almost equally glorious failure of Hawker and Grieve, or the more successful though less spectacular performance of Lieut.-Commander Read and his crew. Indeed, in so far as the latter is concerned, nothing can alter the fact that to America belongs the glory of having been first to throw an aerial bridge across the Atlantic. That her representatives succeeded as a result of meticulously careful organisation and that the actual journey occupied more days than Alcock's did hours, does not for a moment alter the fact that to America belongs the credit of the first Atlantic flight. Still, it is the names of Alcock and Brown which will be for ever associated with the first direct crossing, and we scarcely think it is claiming too much to ask that they should be credited with the first real Atlantic flight. The two crossings are really not comparable at all, for reasons that must be perfectly apparent, and therefore need not be recapitulated.

The incomparable skill shown by the two companions of the flight is beyond all praise. It is apparent from their accounts of the crossing that the atmospheric conditions from start to finish could scarcely have been more unfavourable. Fog, rain, sleet and low-lying clouds obscured their vision, so that only three times were they able to get observations of any kind, and only once, by climbing to 11,000 feet, did the sun become visible. Once they came down sheer from 4,000 feet to within 20 feet of the sea, and only by the exercise of superb air-manship, aided by marvellous presence of mind, was sudden disaster avoided. There are no words in the language which suffice to do justice to the combination of pluck, skill and judgment which in face of all these adverse circumstances brought the machine safely across to a point no more than 10 miles from its objective. It is more than unfortunate that the treachery of an Irish bog meadow led to a bad landing, and caused such damage to the machine as to make it impossible for the intrepid pair to set the final seal on their accomplishment by flying to London, as we believe was the intention.

We most heartily congratulate Alcock and his skilful navigator on their brilliant success at the first time of asking, and at the same time we feel it is but fitting that we should express the feeling of profound satisfaction they have given their fellow-countrymen by thus at the same time placing to the credit of Britain the record of the first direct Atlantic crossing and the world's long-distance aerial record.

Beware of Undue Optimism

After having given all concerned in this wonderful flight all due credit for the performance—and no credit is too great for them—we think it is as well to utter a word of warning against undue optimism. Alcock and his navigator have shown that it is possible to fly across the Atlantic in safety, and at six times the speed of the fastest mail steamer. But it will not do to assume that within a matter of months it will be possible to run regular mail and passenger services by aeroplane or flying boat. That will all come in time, but that time is not yet, and, in the meanwhile, there is plenty to do in the development of aerial services along more suitable routes. We are still of the opinion that the immediate future of Transatlantic aerial services lies with the airship rather than with the heavier-than-air machine. Therefore, we do not think that Alcock's performance detracts in the slightest from the interest attending the forthcoming attempt of R.34 to cross from the East Coast of Scotland to Atlantic City, an attempt which we firmly believe will be completely successful. If it should be, then a great deal of very valuable data should result, bearing on the suitability of the large airship for Transatlantic service and for long-distance work in general. The airship has certain initial advantages over the aeroplane in that it can remain much longer in the air, and can go out of its way to avoid unfavourable conditions of weather which the aeroplane, on the other hand, must go through. Demonstration alone can show its full capabilities in this direction, and it is that demonstration we are awaiting with more than ordinary interest.

The Dominions and the Air Service

According to the Wellington correspondent of *The Times*, Sir J. Allen, the New Zealand Minister of Defence, says that the British offer of aeroplanes is "undoubtedly valuable," representing about £500,000, but its acceptance depends upon the policy of New Zealand, which is not yet determined. The *Wellington Post*, commenting upon this statement, says that the offer of aeroplanes should remind New Zealand equally of British generosity and of her own responsibilities. Admitted, in partnership with the Empire, to the League of Nations, the Dominion should rise to the full status of manhood and accept the gifts as a trust for the purposes for which they are offered and undertake the fundamental obligation of self-defence.

We have no desire whatever to offer criticism, especially on such slight information as that contained in *The Times* cable, but it seems to us that there is a jarring note here. What does the Minister of Defence mean exactly when he says that the policy of New Zealand has not been determined, and that upon this determination depends the acceptance or rejection of the Mother Country's gift? Does he mean to convey that it is possible

New Zealand, which has borne such a gallant part in the War, will rest content under the shadow of the League of Nations and take no part in preparing to defend herself or the Empire? It is impossible to say, but we do think some more adequate explanation is called for of why it should be necessary to publicly hint at the refusal of the free gift of aircraft which ought to form an essential part of the Dominions' contribution to Empire defence. As to the determination of policy, it again seems to us that it is really about time the constituents of Empire had formulated their policy sufficiently to be able to say whether or not aerial defence is to form a part of the programme. If this were done it would tend to save such possible misunderstanding as is all too likely to result from such a statement as that made by Sir J. Allen.

The Scrapping of New Machines

Considerable discussion has been aroused by the latest Report of the Select Committee on National Expenditure, which makes a point of the fact that numbers of new aircraft have been accepted from their constructors and sent straight away to national factories to be destroyed. The Report states that following the armistice the Air Council met and decided to inform the Ministry of Munitions that they required no more aeroplanes. This decision was, however, not adhered to, and in December last they wrote to the Ministry of Munitions stating that they appreciated "that labour and other considerations may prevent the Ministry of Munitions from arranging a complete cessation of further deliveries, and for this reason the Air Council are prepared to accept aircraft and engines of which continued production is required by these considerations."

The Report proceeds: "Accordingly, machines were taken from contractors which were not wanted, and as National Factories were also to be kept going, it was necessary to find work for the people there, with the result that machines taken from contractors to keep the people there employed were sent to the National Factories to be destroyed to keep the people there employed."

We agree that it all sounds very terrible, but what else could have been done? It must be remembered that we had been for over four years working up to maximum production. The armistice came almost as a surprise, and it was utterly impossible to at once bring the wheels of production to a standstill. It *could* have been done, no doubt—at a price. All the workers in the factories, National and private, were weekly servants and could have been discharged at a week's notice. All, therefore, that was necessary was give them that notice and close down production and the factories. But what would, what could, have happened if such insane action as this had been taken? Things are bad enough as they are, but if anything of the sort indicated had been done we should have had red revolution before the end of last year and, what is more, we should have deserved it. Undoubtedly, it is unfortunate that such waste should have been incurred, but we really cannot see how it was to be avoided except at the gravest risk of trouble and revolution. And, after all, if it is regarded sensibly it will be seen to have been no more than an incidental waste of war. If the war had continued, all these machines would have been required, and the nation would have gone on paying

Flight—And the Men



Major-General Sir HUGH M. TRENCHARD, K.C.B., D.S.O., Chief of Air Staff

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for them willingly and cheerfully, recking little of what was to become of them in the end, and we should have had to pay for a great many more than form the subject of complaint now. We are all against waste in the public service, and much as we deplore the necessity for manufacturing a thing for the sole purpose of destroying it on completion we really cannot see what else could have been done in the circumstances. Possibly some of the critics of the Air Council and the Ministry of Munitions will say what ought to have been done and outline the probable consequences of their advice had it been tendered and taken at the time.

The Air Ministry and its Cars

The Select Committee seems to have gone exhaustively into the question of the alleged abuse of cars by the staff and officials of the Air Ministry, and a schedule is appended of the officers and others for whom cars are provided. So far as the individual officers named are concerned, we cannot see anything to complain of in their being afforded the necessary means of locomotion to enable them to more efficiently carry out their duties. There is no doubt, however, that there is still a great deal of abuse of the facilities given to ordinary members of the staff and that cars are used for quite other than purely Service purposes. The Committee, indeed, draws particular attention to this, and mentions one case in which a powerful car was used for no other purpose than to bring an official to town in the morning, take him home to lunch and back, and then convey him home again in the evening. Another extravagant abuse is in fetching cars up from Kennington to the Hotel Cecil in order to convey officers to the War Office or the Treasury—a mere matter of a few hundred yards. One car did as much as 106 miles in a week on this duty, at a cost of 11½ gallons of petrol, plus wages, tyres and upkeep. Altogether, the cost of cars employed on Air Ministry services at headquarters works out at £129,740 per annum, which is a stupendous figure in peace time. Surely, a return should be made at once to the old conditions, and officers and officials should find their own means of conveyance to and from their homes and clubs. If it is of no avail for the Government to preach economy when an example of wanton extravagance like this is disclosed. Moreover, the Government is now asking the patriotic citizen to put his money into Victory Loans, but it is scarcely to be wondered at that a great many who are able and would be willing to subscribe are chary of doing so because they fear the result of providing the Government with more millions to splash in the wild orgy of spending. We agree that this business of the use of cars is a comparatively minor matter, but it is the principle of useless extravagance which is objectionable, apart altogether from whether the sums involved are great or small.

Aerial Service in South Africa

A message from South Africa states that a commercial aviation company has been formed for promoting aerial services between Johannesburg and Pretoria, and also between Johannesburg, Maritzburg and Durban, while, in addition, demonstrations will be given with the object of familiarising the public with the new venture. South Africa is certainly to be congratulated on the enterprise shown by this venture, which we trust and believe will be fully successful. The country over the routes to be

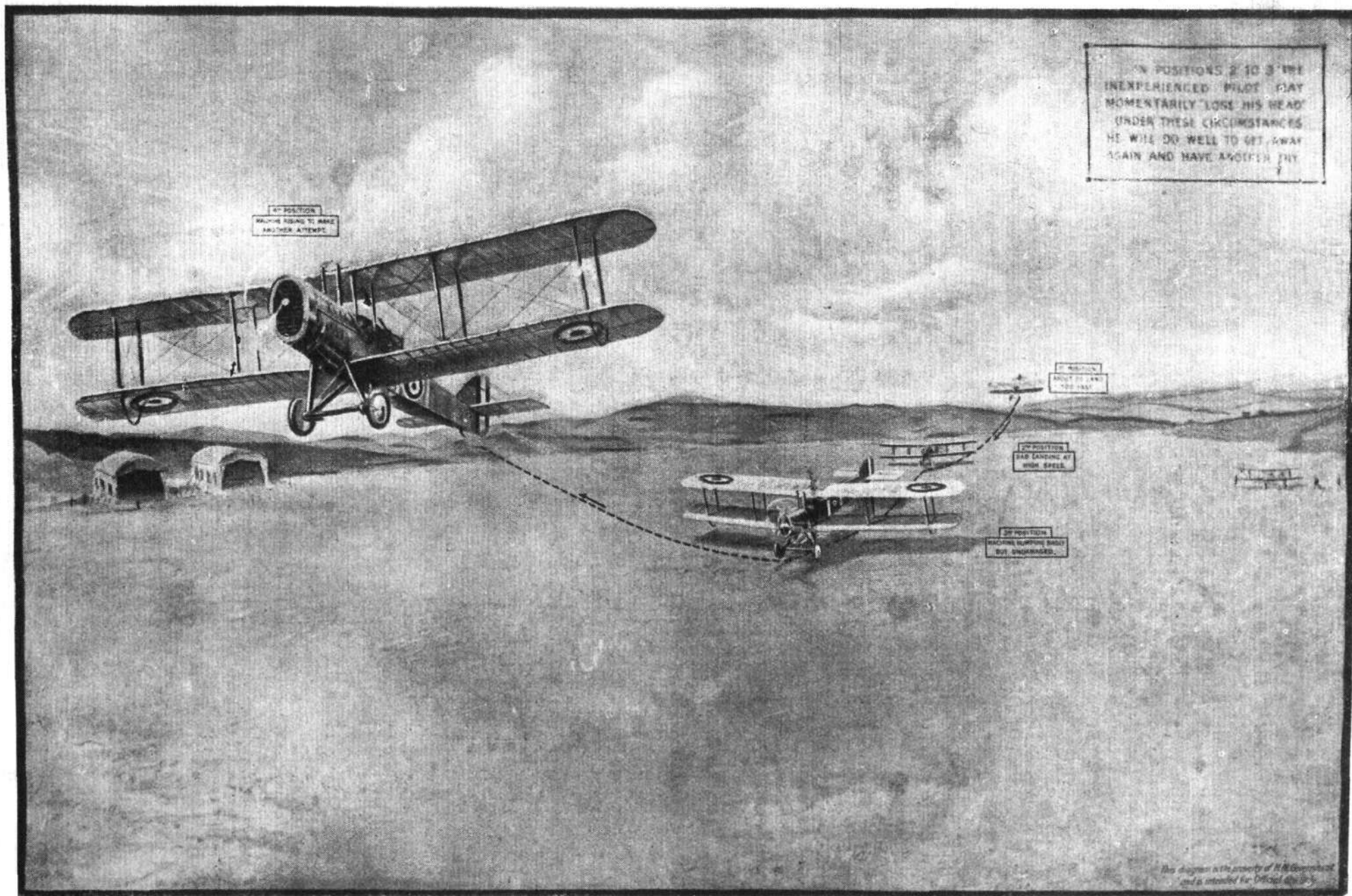
initially opened up is eminently suitable for such services, and there is little doubt the time occupied in the conveyance of passengers and mails, as compared with the railways, will be such as to fully justify them. It would appear, also, that those behind the new enterprise are alive to the fact that a great deal of education work will have to be done in order to secure the confidence of the public to whom they must look for success. This is an aspect of commercial aviation to which we have drawn attention several times during recent months and is one on which we hold very strong views. It seems to be imperfectly understood by many in the movement that it is really upon the proper education of the general public that the success of commercial flying most depends. It is true enough that such services, mostly of the "joy-flip" kind, which have been established here have no difficulty in securing more passengers than they can deal with, but it requires to be understood that the patrons of these services are really the sporting minority which believes there is a certain amount of risk attendant on flying and is content to take it as it comes. Generally speaking, however, the man in the street has not been educated up to the point at which he will trust himself in an aeroplane as readily as he will book by rail or steamer, and until that point has been reached commercial aviation cannot be more than a modified success. The South African company is indubitably on the right lines and its educational programme is likely to do considerable amount of good to the movement.

Wireless Progress

Little by little the public is learning of the tremendous progress made in the development of wireless telegraphy during the war and to what an extent it can be called to the aid of aerial navigation. A good example is afforded by the giant Handley Page machine which has been equipped for the Atlantic flight—and although the *Daily Mail* prize has been so splendidly won by Capt. Alcock and Lieut. Brown on the Vickers-Vimy machine, we still hope to see the Handley-Page, without difficulty, also cross the Atlantic shortly. A wireless set has been installed which will enable the machine to notify London direct of her start and to keep communication during the whole of the flight. The works at Cricklewood will learn direct from those in charge of the progress of the flight—the position of the machine, the running of the engines, the weather met with and every detail of interest. This is all very interesting to the casual observer, but to those who think beyond the surface it is more than interesting—it is of the very highest importance as a landmark in aviation. It means in reality that the safety of overseas flight is immeasurably enhanced by the possession of so rapid and ready a means of long distance communication, which can keep in touch with points distant nearly two thousand miles apart. By its aid assistance can be called up in case of necessity, while if untoward happenings should occur the exact position of the machine and its passengers and crew can be communicated with absolute certainty in a very few seconds. It certainly marks progress of a most important nature.

The Revival of Aerial Sport

One of the most satisfactory signs of the times is the healthy state of aerial sport, which, since the restrictions on private flying were removed, has shown every indication of strong vitality. It is early yet for



A BAD LANDING.—One of the series of drawings prepared by the Air Technical Service for use in R.A.F. Schools

it to have shown any great actual signs of life, except in so far as preparation for events to come is concerned, but if we are to judge by the announcements that are being made and the talk there is of reviving the pre-War activities and extending programmes, there seems every probability that there will be a boom in aerial sport in the very near future. Hendon is once more to become a sporting centre, where all sorts of races and tests of flying skill will be organised in order to enable our pilots to "keep their hands in," and at the same time demonstrate to as large a public as possible the wonderful safety and controllability of the modern aeroplane. In many other parts of the country people are turning their attention to aerial sports as an attraction to the general public, and it looks as though the sporting side of the movement were taking a new lease of life, and that to some purpose. Undoubtedly the doings of the near future will dwarf into insignificance the sports meetings of before the War, although these bulked quite largely in the public eye.

We believe this all tends to the good of the movement in general, since the more the aeroplane is in evidence, and the greater the interest which can be created in the minds of the public, the more rapidly will the latter acquire confidence in aircraft as a means of commercial transport. Not for a moment do we desire to bring the element of commercialism into the sport. Quite the contrary. We are all for keeping sport and commerce as far asunder as the poles. At the same time, we have to visualise the whole as one great movement, and to regard how each side, each component part, can help the other, and we can, in this instance, see how sport is going to help commercial aviation through its influence on the public, upon whose confidence in its safety and certainty the future of flying so much depends.

Another aspect of the matter is that it is very greatly to the experience gained in racing and in sport generally that we must look to the future improvement of machines and engines. Before the War it was in this direction we had to look for almost the whole of the progress made in general design both of the aeroplane and its power plant. Then the War came, and with it the need of improvement became a hundred times accentuated, while the opportunities of gaining experience tending to progress were multiplied in an even greater ratio. The very natural result of the cumulative experience of nearly five years of war is that the aeroplane had advanced far beyond anything that could have been possible in a corre-

sponding period of peace. But now the incentives of war have disappeared, and we have to look in another direction for the guide to progress. Much will be learnt from the experience gained in the comparatively hum-drum sphere of commercial aviation. More will be gained by a sane indulgence in sport which depends entirely upon the spirit of emulation among the contestants which leads each to the endeavour to do better each time and so leads to progress.

The Victory Aerial Derby

Without wishing to institute comparisons between different events or types of events, we especially welcome the news that the "Aerial Derby" is to take place again on Saturday next. The course chosen, which is the same as before, round London, but must this year be covered twice by the competitors, is one that ensures the maximum number of people seeing the machines as they pass on their way. It is probably within the mark to say that between three and four millions of people will see most of the competing machines at one point and another of the course. Familiar as the War has made the sight of aircraft to the average citizen, it is doubtful if he now regards an aeroplane with any more than a detached interest. It is simply an aeroplane in flight, come from whence he knows not and proceeding he equally knows not whither. So the sight of it passes as an incident which is forgotten almost in a moment, and what we may call the educative value is practically non-existent. As we have said under another heading, we hold very strongly that a great deal of education of the public is needed to assist in bringing aviation into its proper place in the scheme of transport, and we can imagine nothing more educative in itself than such an event as the Aerial Derby. There is a direct interest in it for everyone. The observer who sees the machines passing over knows they are taking part in a race. He knows where they started; the distance they have to cover; where they will finish; and the time they ought to take to cover the course. His newspaper has given him the names of the pilots and the types of machine they are flying, so it may well be he will have a direct interest in the result because he has invested a little money on the chances of his fancied pilot. We should like to see more of these circular races, not alone because of their sporting character but because of the high propaganda value they possess.

Repatriation of R.A.F. Officers

CASES having occurred in which demobilised officers and others entitled to passages abroad by virtue of service in the R.A.F. have made their own arrangements for passages, attention is drawn by the Air Ministry to the fact that if an individual books his own passage he has no claim to a refund, either of the expense incurred or of the cost of a public passage.

Instead of making his own arrangements in such a case, he should apply for passage to the Officer i/c R.A.F. Repatriation Records, Winchester, who will make all the necessary arrangements for the provision of a public passage for anyone who has been serving in the R.A.F., and is entitled to repatriation.

Aviation in Scandinavia

Word comes from Stockholm that the first official Scandinavian Air Traffic Conference, which last week discussed a scheme for the regulation of aircraft traffic for the four Scandinavian countries, including Finland, has recommended that common rules should be adopted for the granting of certificates of the efficiency and air worthiness of aero-

planes and seaplanes. The question of the qualifications of applicants for pilot certificates and various schemes for promoting air traffic were discussed, and the Governments concerned were asked to nominate as soon as possible a Scandinavian Committee of experts, one for each country, to work out the details and draft a scheme of Inter-Scandinavian legislation on the subject. It is hoped that the four Governments will come to an agreement with other nations to promote international air navigation.

Aviation in Afghanistan

ONE of the four terms which the Indian Government asked the Afghans to submit to before the question of an Armistice could be considered was that our aeroplanes should be allowed to reconnoitre over the Afghan lines but not to bomb.

It appears that the bombing of Jelalabad last month, when two tons of bombs were dropped, created widespread consternation. Aeroplanes rendered effective assistance in the relief of Fort Thal, by bombing and machine-gunning the enemy's forces.

THE CAPRONI BOMBING TRIPLANE CA-4-1915*

THE Caproni triplane represents a type designed and built by the famous Italian constructor since 1915. This machine was created at that time for the night bombing of important military and naval bases, railway stations and war plants. As in the preceding types of machines by the same constructor, the type CA-4 triplane has for its distinctive characteristic the number and arrangement of the motors, originated by the famous Italian constructor. There are three motors, one driving a pusher screw mounted in a central *nacelle*, the other two are each mounted in the nose of a *fuselage* and drive a tractor screw. These two *fuselages* and the central *nacelle* are attached to the spars of the middle wing, whilst the centre section of the lower plane carries the bomb rack, also designed by Engineer Caproni.

Normally the crew of the machine consists of two pilots, seated side by side, and a gunner—who operates a 1½ in. gun and two Fiat machine guns—located in the central *nacelle*, and a gunner or observer in each of the *fuselages*, which are also fitted with Fiat machine guns. Each of the crew can pass from one cockpit to another, a foot walk covered with veneer wood being provided on the middle plane between the central *nacelle* and the *fuselages* for this purpose.

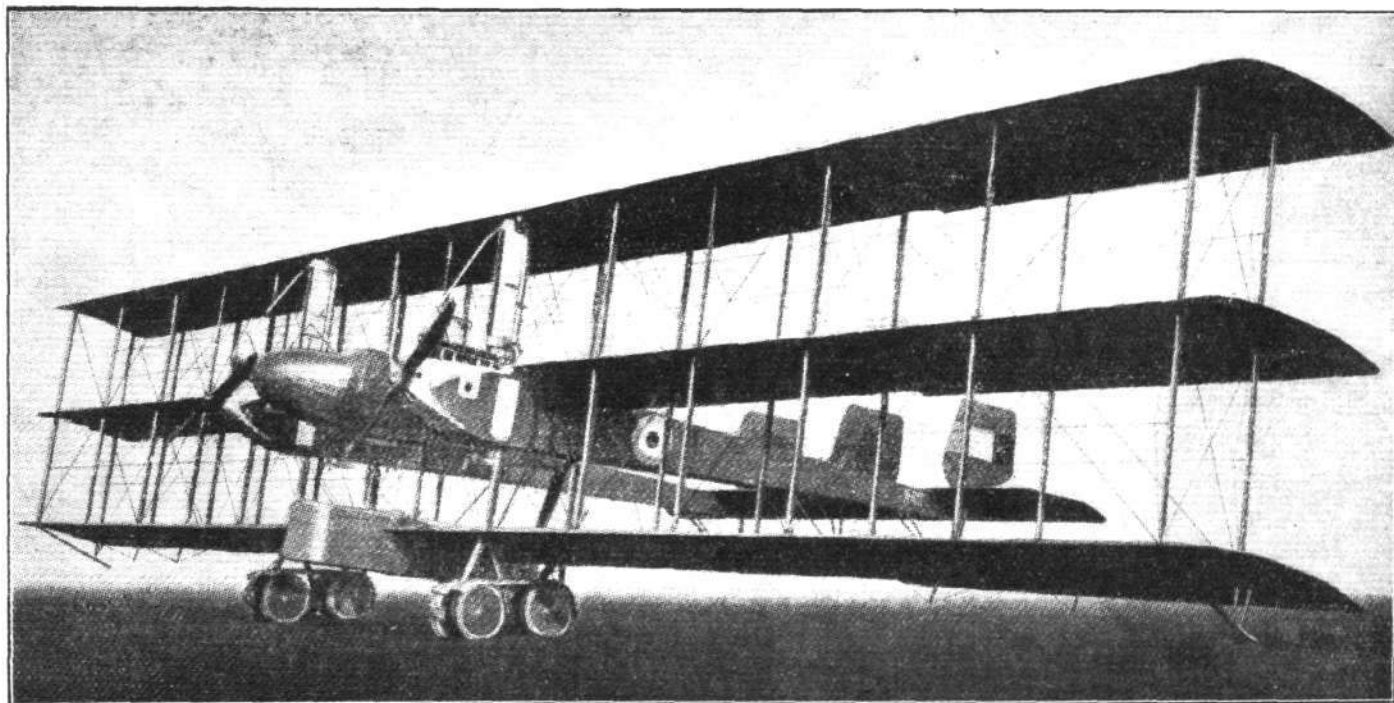
The CA-4 triplane has been successively equipped with three different types of motors. At first, three Isotta-

trailing edges. On the linen, above and below the wing, maple batten strips are screwed in correspondence to the ribs.

For the interplane struts, ash, spruce and seamless steel tubes are employed, and some of the struts have adjustable ends. The bracing is, as usual, with steel cables and wires.

As on all Caproni bombing machines, the stabiliser, elevator, rudders and *ailerons* are constructed of steel tubing. The stabiliser is solidly braced to the *fuselage* by means of cables and steel tube struts. There are three balanced rudders and a one-piece elevator. *Ailerons* are fitted to all three planes. Dual control is fitted, so that the machine can be controlled by either pilot at will. The control system for the *ailerons* and elevator is a combination of the wheel and stick type, and the rudders are operated by a foot bar of the usual pattern.

The petrol is fed from three tanks, one each on the *fuselages* and one in the central *nacelle*. Three wind-driven centrifugal pumps deliver the petrol from the tanks to a central distributor, and thence to the carburettors of the engines. Both pilots have close at hand the necessary devices for controlling the petrol supply. For testing the motors on the ground two small gravity tanks are provided, but these are excluded from the main system when the machine is in flight. In cases



This three-engined 1,200 h.p. Caproni triplane, has a span of about 103 ft., and carries a useful load of several tons

Fraschini 8-cylinder vertical 240-250 h.p. engines were used; later three Fiat A/12-bis 6-cylinder vertical engines were fitted, and finally three Liberty 12 Navy type (low compression) engines were adopted. With an aggregated useful military load of 6,600 lbs. the performance of this triplane, equipped with Liberty engines, has been considerably better than those obtained with the other types of motors, especially in climbing. In the official tests, at full load and fully armed, a speed of 98 m.p.h. at 6,560 ft. was reached. The average rates of climb attained (with Liberty motors) at full military loads were: 3,280 ft. in 6 mins., 6,560 ft. in 14 mins., and 10,000 ft. in 25 mins. The ceiling is at about 16,000 ft. The total weight of the machine, empty, is 11,100 lbs., and with full military load, 17,700 lbs. With a complete fuel load of 550 gals. the bomb rack is supposed to be loaded with 2,500 lbs. of bombs, but practically in almost all bombing raids the load of bombs exceeded 3,000 lbs.

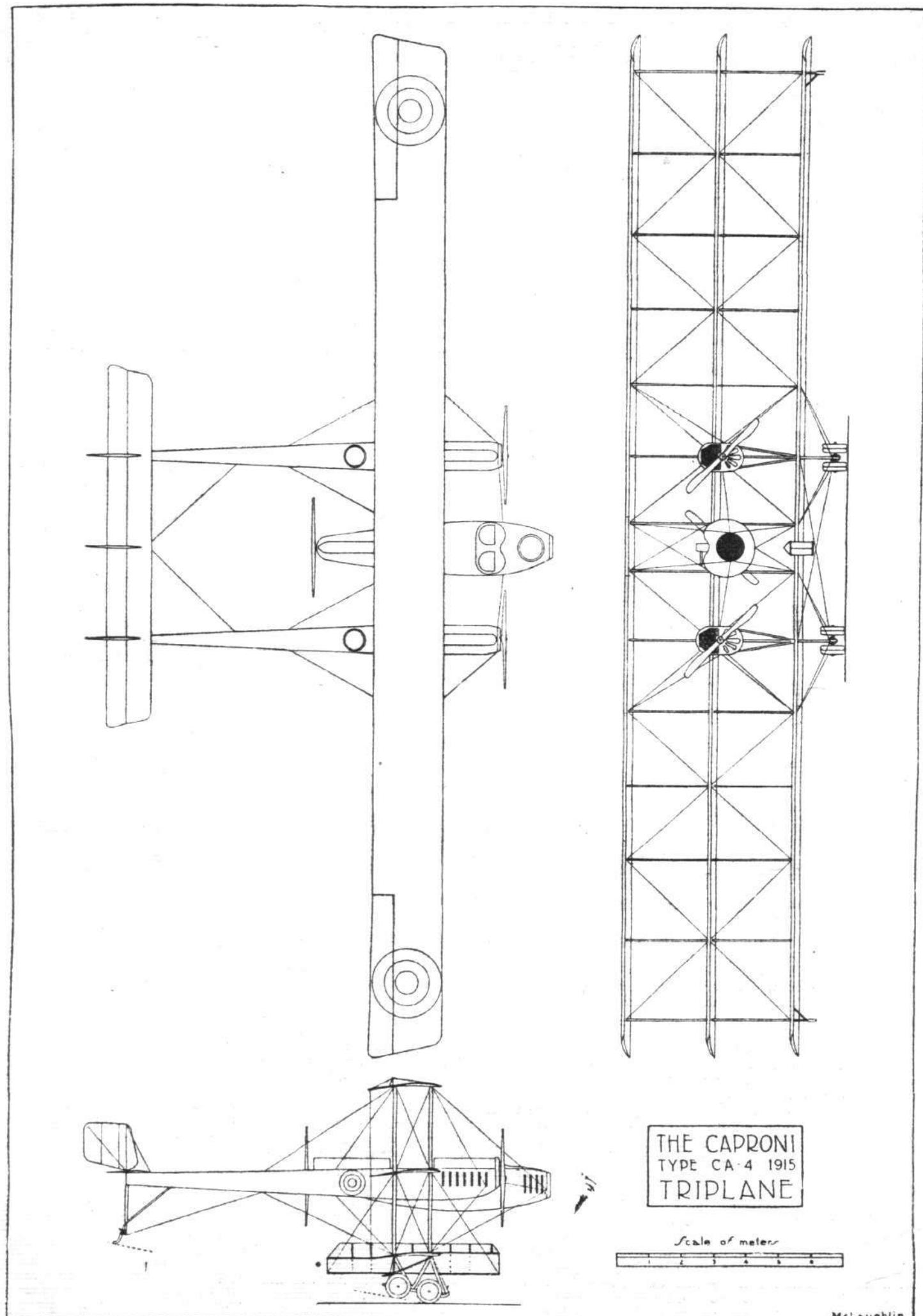
Each of the three planes is built up in seven sections, the corresponding sections in upper, middle and lower planes being of equal span, as follows. Centre sections, 5 ft. 6 ins.; intermediate sections (two), 13 ft. 1 in. each, and outer sections 18 ft. 3 ins. The wing spars are of box spar section, and the ribs, double ribs and box ribs are of white wood and ash. Between ribs the spars are wrapped with strong linen. The connection between the two subsequent sections is obtained with the male and female box fitting system. The covering is linen, nailed on the rib flanges and on the leading and

of emergency the pilot on the left can operate a hand-pump, which is capable of feeding the three engines from the central tank. Each engine has its own oil tank and a radiator for cooling the oil. The engine radiators are mounted either in the nose of the respective *fuselage* or *nacelle*, or else above in each engine, as shown in the photographs. All the radiators are of the honeycomb type, and are fitted with shutters.

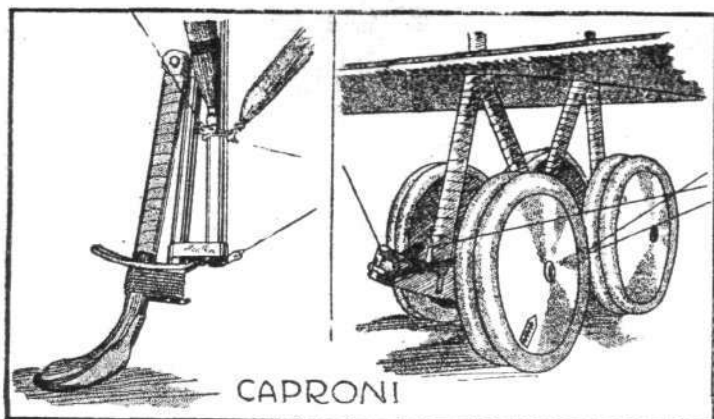
The central *nacelle* is perfectly streamlined. Two main *longerons* with steel tube compression struts between them, wire braced, form the frame on which a set of ribs are fastened, giving the shape of the *nacelle*. Birch veneer and walnut are employed in the construction of these ribs—a similar form of construction to that employed for flying boat hulls. The front upper part of the *nacelle* is formed by a cowling made of plywood with interposed layers of fabric. The two pilots are seated behind the front gunner, and behind them again is the petrol tank. At the rear of the latter, which is of the same circular section as that of the *nacelle*, is a short foot-way allowing free access to the engine at the rear. The engine is enclosed by cowling.

The two *fuselages* are flat-sided and of the usual girder construction—four ash *longerons*, compression struts, and wire bracing. All the fittings to which the diagonals are fastened are manufactured from the same set of dies, and are extremely simple, light and free from welding. Their application is such that the *longerons* are not pierced by bolts or screws. The engine housing is cowed with sheet aluminium. The petrol and oil tanks are situated just behind the engine,

* Courtesy Aerial Age U.S.A.).



THE CAPRONI BOMBING TRIPLANE, CA-4.—Plan, side and front elevations to scale



Two detail sketches of the Caproni CA-4 Triplane. On the left one of the tail skids, and on the right one of the under-carriage units.

and the gunner's cockpit is located a short distance at the rear of the trailing edge of the middle plane. A tail skid is mounted on the end of each fuselage. The landing gear is of special Caproni design, and is very strong. It consists of two sets of M struts, each carrying a short skid on which are

sprung two pairs of twin wheels mounted one in front of the other. Each set of wheels is located under the fuselages. The M struts are of laminated ash and spruce, wrapped with strong canvas fabric. The axles are attached to the skids by means of shock-absorbing rubber cord, and steel rods anchored in universal joints which absorb lateral oscillation. The chassis is braced in the usual manner with double steel cables.

The following are the principal characteristics of the Caproni CA-4 triplane:—

Overall span	.. .. .	96 ft. 6 ins.
Overall length	.. .. .	42 ft. 11 ins.
Overall height	.. .. .	20 ft. 8 ins.
Chord	.. .. .	7 ft. 0 ins.
Gap	.. .. .	8 ft. 0 ins.
Area of main planes (total, including ailerons)	.. .. .	2,223 sq. ft.
Area of ailerons (six)	.. .. .	227 sq. ft.
Area of rudders (three)	.. .. .	81 sq. ft.
Area of tail plane	.. .. .	109.75 sq. ft.
Area of elevator	.. .. .	81.6 sq. ft.
Overall span of ailerons	.. .. .	19 ft. 4 ins.
Overall span of tail plane	.. .. .	34 ft. 1 in.
Overall span of elevator	.. .. .	36 ft. 3 ins.
Angle of incidence (main planes)	.. .. .	3° 50'.
Angle of incidence (tail plane)	.. .. .	3° 8'.

The Dutch Aircraft Exhibition

We understand that among the leading British firms who have notified their intention to participate in the aircraft exhibition at Amsterdam which is to open on August 1 are the Vickers, Handley Page, Bristol, Blackburn, British Aerial Transport, Beardmore and Cosmos Engineering Co. The Department of Overseas Trade and the Air Ministry are giving official assistance. Flying displays will be held, and it is hoped to institute an aerial service to Amsterdam from England. The organiser in Great Britain is Mr. J. Van der Steen, Trafalgar Buildings, W.C. 2.

Pushing up World's Height Record

Nor satisfied with his height record of last week Lieut. Casole on June 14 took his Nieuport up to 10,100 metres (33,330 ft.) during a flight from Villacoublay which lasted 1 hr. 55 mins. As in his previous flights, he used his Nieuport, fitted with 300 h.p. Hispano-Suiza motor. His previous highest was 9,500 metres (31,350 ft.) and not 51,350 ft., as a printer's error made it appear in our last issue.

Woman's Height Record

In view of the fact that Miss Ruth Law had claimed to have bettered the performance of Baroness de la Roche the other day, when she flew to a height of 3,900 metres, a

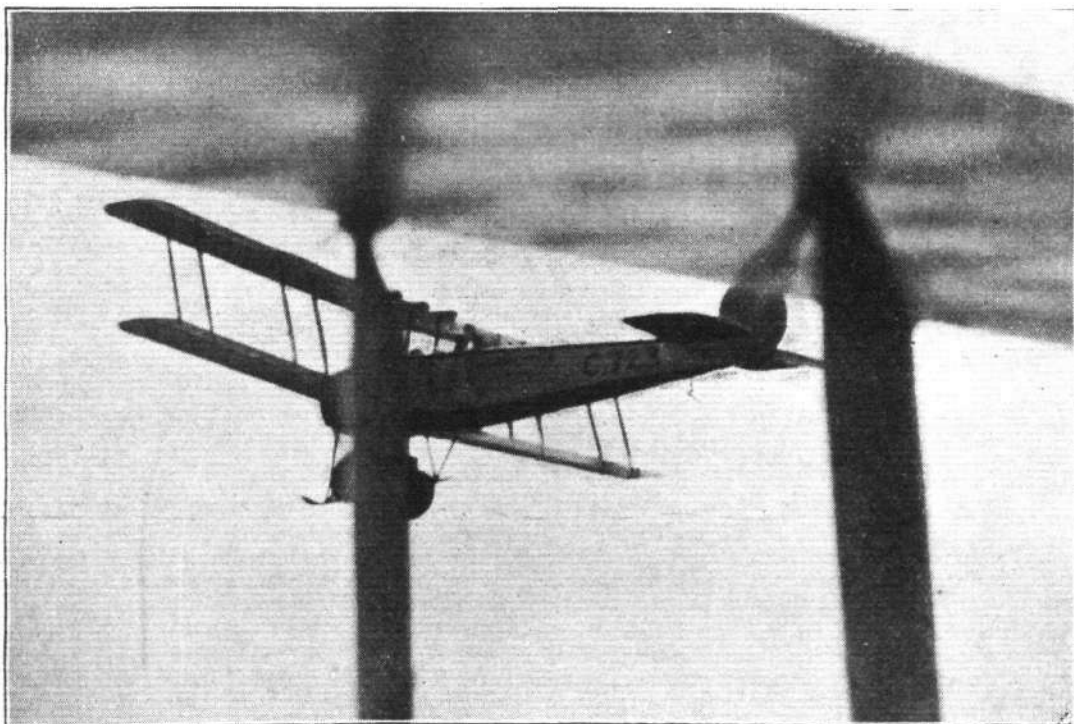
new attempt was made on June 12. Starting from Issy on a Caudron biplane, Baroness de la Roche climbed steadily until she reached a height of 4,800 metres (15,840 ft.). Coming down she lost her way in a mist, but eventually landed safely at Gastins, 8 kiloms. from Nangis, after a flight of 2 hrs. 7 mins.

South American Height Record

WHEN the news first came to Europe recently that Lieut. Cortinez of the 1st Aviation Company of the Chilean Army, had successfully flown across the Andes and back, it was not then realised that during this remarkable flight he had also established a height record for South America. For many years the height of 6,250 metres recorded by the late Mr. Jorge Newbery, who lost his life in an essay to fly across the Andes, had been unchallenged. This year, however, Lieut. Parodi of the Argentine Army attained to 6,480 metres on a Nieuport plane which feat was eclipsed by Lieut. Cortinez within a few days by the latter crossing the Andes on a "Bristol" monoplane at an altitude of 6,500 metres.

New Swedish Aerodrome

It would appear that Sweden is really out to develop commercial aviation. A message from Gothenburg states that negotiations are being carried on for the purchase of a number of farms on the island of Hisingen, opposite Gothenburg, with the object of establishing a flying port.



The Snapper, snapped.—One of the G.W. Avro biplanes, with a cinema operator on board, photographed by our photographer, from a de H. 9 (Airco) machine at Hendon at the week end

THE ROYAL AERO CLUB OF THE U.K.

OFFICIAL NOTICES TO MEMBERS

Trans-Atlantic Flight Royal Aero Club Banquet to Capt. J. Alcock and Lieut. A. W. Brown

A Banquet will be given by the Club to Capt. J. Alcock and Lieut. A. W. Brown at the Savoy Hotel, London, on Monday next, June 23, 1919, at 7.30 p.m., to commemorate their successful crossing of the Atlantic.

Tickets £1 ros. each.

Members' guests, including ladies, will be accommodated as far as possible.

Early application for tickets is requested.

Rolls Memorial Library

A Meeting of the Library Committee was held on Monday, June 16, 1919, when there were present:—Maj. C. C. Turner, Mr. Howard T. Wright and Mr. Harold E. Perrin, Secretary.

SPECIAL COMMITTEE MEETING

A Special Meeting of The Committee was held on Tuesday, June 17, 1919, when there were present:—Brig.-Gen. Sir Capel Holden, K.C.B., F.R.S., in the Chair, Mr. Ernest C. Bucknall, Mr. G. B. Cockburn, Lieut.-Col. John D. Dunville, R.A.F., Lieut.-Col. T. O'B. Hubbard, M.C., R.A.F., Lieut.-Col. F. K. McClean and Mr. Harold E. Perrin, Secretary.

Election of Members.—The following New Members were elected:—

Lieut. Ian Patrick Anderson, R.A.F.

Lieut. Cecil Wasbrough Andrewes (1/5th Highland Light Infantry).

Lieut. Walter William Baker (Hampshire Regt.).

Horace Rycroft Bass.

Maj. Walter Henry Bell, R.A.F.

Maj. Francis Herbert Bramwell, R.A.F.

Edward John Bray.

Bertram Christian.

Albert Edward Cole.

Capt. Edward O'Donovan Crean, R.A.F.

Capt. Rupert John Goodman Crouch, R.A.F.

Frazier Curtis.

Capt. Robert Frederick Lea Dickey, R.A.F.

Capt. Wilfred Henry Dunn, R.A.F.

Maj. Charles William Nutting, R.A.F.

Lieut.-Col. Hubert Pennington, C.M.G., D.S.O., R.A.S.C.

Capt. John William Pinder, D.F.C., R.A.F.

Oswald Eric Tattersall.

Capt. Albert Peter Thurston.

Lieut. Harold Tomlinson, R.A.F.

Capt. Cresswell Turner, R.A.F.

Capt. Wilfrid Underhill, R.A.F.

Capt. Robert Howell Craster Usher (Wiltshire Regt.).

Trans-Atlantic Flight.—The following messages from the Officials of the Club in Newfoundland and Ireland were reported:—

"St. John's,
Newfoundland.

"Royal Aero Club, London.

"Capt. Alcock and Lieut. Brown left St. John's, Newfoundland, in a Vickers-Vimy Rolls on flight to England to-day, 14th June, 1919, at 4.13 p.m. G.M.T.

"CAPTAIN CLEMENTS."

"Dublin.

"Royal Aero Club, London.

"Official time of arrival of Vickers Vimy Rolls crossing coast line Ireland was 9.25 a.m. B.S.T. (8.25 a.m. G.M.T.), 15th June, 1919. I examined machine and found everything in order.

"MAJOR R. H. MAYO."

Balloon Ascents.—In view of the coming revival of the sport of ballooning, those wishing to participate, including owners of balloons, are requested to communicate with the Royal Aero Club, 3, Clifford Street, W. 1.

THE FLYING SERVICES FUND

(Registered under the War Charities Act, 1916)

Administered by the Royal Aero Club

For the benefit of Officers, Non-Commissioned Officers and Men of the ROYAL AIR FORCE who are incapacitated while on duty, and for the widows and dependants of those who are killed or die from injuries or illness contracted while on duty.

Honorary Treasurer:

The Right Hon. LORD KINNAIRD.

Committee:

H.R.H. PRINCE ALBERT, K.G. (Chairman).

Mr. CHESTER FOX.

Lieut.-Col. T. O'B. HUBBARD, M.C., R.A.F.

Lieut.-Col. C. E. MAUDE, R.A.F.

Brig.-Gen. R. H. MORE, C.M.G.

Secretary:

H. E. PERRIN.

Bankers:

MESSRS. BARCLAYS BANK, LTD., 4, Pall Mall East,
London, S.W. 1.

Subscriptions:

	£	s.	d.
Total subscriptions received to June 3, 1919..	£15,062	11	5
W. G. Lavender..	2	12	4
Miss E. Bairdsmith (fourth contribution) ..	1	1	0
Total, June 17, 1919 ..	£15,066	4	9

Offices: THE ROYAL AERO CLUB,
3, CLIFFORD STREET, LONDON, W. 1.

H. E. PERRIN, Secretary.

THE £10,000 FLIGHT TO AUSTRALIA

The conditions for the prize of £10,000 offered by the Commonwealth Government for a flight from England to Australia were revised at a conference recently convened by Mr. Hughes, Prime Minister of Australia. It has been decided that the present arrangements and conditions do not afford a reasonable prospect of success, and, therefore, the competition will not open until September 8. The new conditions are:—

1. All machines entering must have a flying radius of 500 miles.

2. All machines must carry a competent navigator, not necessarily certificated.

3. Proper provision is to be made for the supply of spare parts, and for their carriage where necessary.



Aerodromes for Disposal

In the important sales of Government property now being held in various parts of the country, the Disposal Board of the Ministry of Munitions have arranged to include several aerodromes that are not permanently required for Government purposes. Of these, two are situated at Goldhanger and Stow Maries in Essex, two in Suffolk at Burgh Castle and Covehithe, one at Lilbourne, on the borders of Northants and Warwickshire, and the others are at Ramsey Hunts), Telscombe (Suffolk) and Edzell (Kincardine). In

4. Satisfactory proofs that properly marked landing-places are available, and the necessary stores, petrol, etc., have been provided.

To meet the cases of competitors who may be financially prejudiced by the postponement of the flight to September 8, the Commonwealth Ministers have agreed that competitors who were, but are not now, members of the A.F.C. or R.A.F. may be paid equivalent rates of pay to that provided for members of the F.C. from the date of their notification of entrance for the competition to the date fixed upon when the flight may begin.

Civilian competitors who can prove that they have been financially prejudiced by the postponement will be similarly treated.

some cases the buildings, with the land on which they stand, might be acquired without the aerodromes, and by means of their admirable situation be made suitable for factories, hospitals, convalescent homes, training centres, etc. The various buildings are of brick, corrugated iron, and timber, with water supply and electric light installed, and could readily be adapted for any of the purposes mentioned. There are also permanent roads. Intending purchasers may obtain further particulars by applying to the Disposal Board, D.B.I.a.3, Room 135, Charing Cross Buildings, Villiers Street, W.C. 2.

THE TRANSATLANTIC FLIGHT

WITH a British-designed and British-built aeroplane and engine, piloted by British officers, rests the honour of having made the first non-stop flight across the Atlantic. In an Editorial note on page 791 we have dealt with some phases of this magnificent achievement of Capt. J. Alcock and Lieut. A. Whittam Brown on their Vickers-Vimy-Rolls-Royce biplane, which has won for them the *Daily Mail* prize of £10,000, the 2,000 guineas from the Ardath Tobacco Co., and £1,000 from Mr. Lawrence R. Phillips for the first British

time, June 15; Vickers-Vimy Atlantic machine, leaving Newfoundland Coast 4.28 p.m. (G.M.T.), June 14. Total time 16 hours 12 minutes. Instructions awaited."

The Royal Aero Club representative, Maj. R. H. Mayo, was in Dublin, but he immediately set out for Clifden, and by a friendly lift in an aeroplane and the aid of a motor car he got across Ireland in the quickest possible time. After an examination of the machine he wired the following message to the Royal Aero Club:—



THE VICKERS "VIMY-ROLLS."—This is the machine on which Captain J. Alcock and Lieut. A. W. Brown crossed the Atlantic. Three-quarter front view.

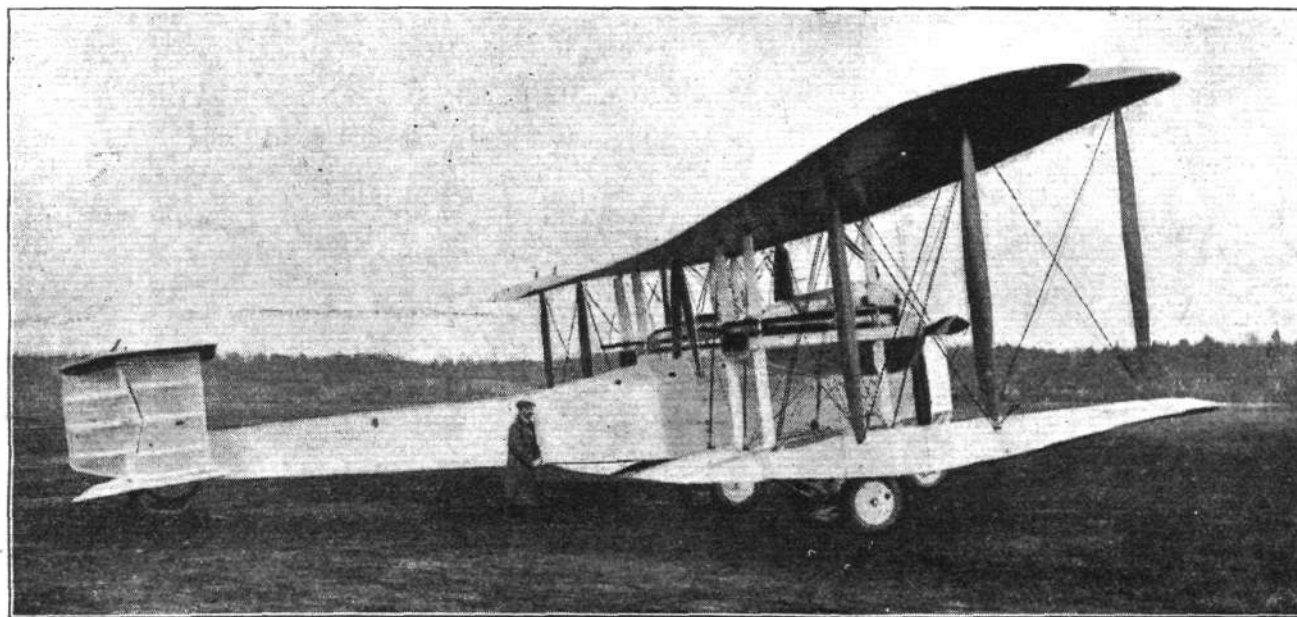
subject to fly the Atlantic, and it only remains to record the material facts.

The news that the machine had definitely started on its voyage came in the form of the following message from Lieut. Clements, R.A.F., the official starter at Newfoundland:—

"Capt. Alcock and Lieut. Brown left St. John's, New-

"The official time of arrival in Ireland (crossing the coast) was 9.25 a.m., British summer time, actual landing time 9.40 a.m., B.S.T. I have examined the machine and found everything in order."

As soon as the formalities were completed Capt. Alcock and Lieut. Brown dismantled the instruments from their machine and prepared to make for London as quickly as



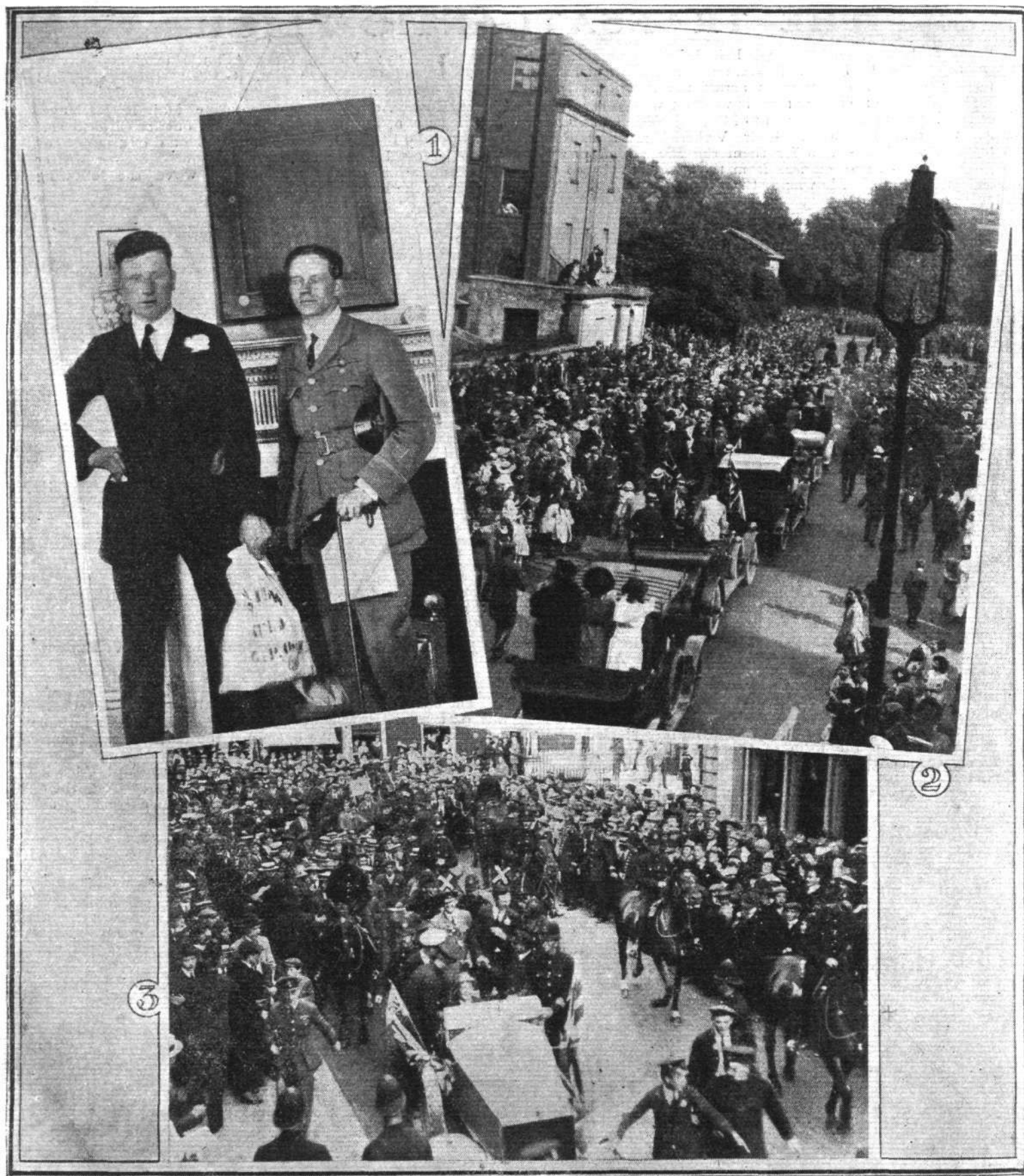
Three-quarter rear view of the Vickers "Vimy-Rolls" on which Capt. J. Alcock and Lieut. A. W. Brown crossed the Atlantic.

foundland, in a Vickers-Vimy machine on a flight to England to-day, June 14, at 4.13 p.m., Greenwich mean time."

Then followed a silence of a little over sixteen hours, ending by the following message from Capt. Alcock and Lieut. Brown to the Royal Aero Club, sent off from the wireless station at Clifden:—

"Landed Clifden, Ireland, [at 8.40 a.m., Greenwich mean

possible. It was soon made clear to them, however, that Ireland wished to accord them a real welcome. They were given a civic reception at Galway, and all the way to Dublin on Monday afternoon they had a most enthusiastic greeting. On arriving at Dublin it was intended that Capt. Alcock and Lieut. Brown should go to the Royal Irish Automobile Club, but the students of Trinity College carried Capt. Alcock into



"Flight" Copyright.

*J. Alcock.
Capt. N. L. L.*

*Witten Brown
3rd Manchester att^d R.A.F*

THE ATLANTIC FLIGHT.—Capt. J. Alcock and Lieut. Witten Brown at the Royal Aero Club on Tuesday evening; on right the procession of cars leaving Euston Station for the Royal Aero Club, as seen from the London and North-Western Railway Hotel, and below the arrival of Capt. Alcock and Lieut. Brown at the Royal Aero Club in Colonel Frank McClean's Rolls-Royce car.

"commons" where there was much cheering with some speeches. Eventually the provost rescued the pilot and he and Lieut. Brown were able to go to the Automobile Club for dinner, afterwards proceeding to the Chief Secretary's Lodge where they spent the night as the guests of Mr. Macpherson.

Capt. Alcock and Lieut. Brown crossed to Holyhead on Tuesday morning, their progress from there to London being largely a repetition of the proceedings on the occasion of Mr. Hawker's homecoming. At Holyhead they were met by Mr. Pierson, the designer of the Vickers-Vimy, and by Capt. Vickers. There was a very large gathering to see them off, and at Chester, Crewe, and Rugby there were cheering crowds. At Crewe Mr. Claude Johnson, managing director of Messrs. Rolls-Royce, Ltd., joined the train and at Rugby Miss Kennedy, Lieut. Brown's fiancée, and her father, were waiting.

Profiting by their experience when Hawker came home, the authorities made arrangements to deal with a "big push" in London. At Euston the platform was crowded, so much so that Genl. Sir Capel Holden, the Vice-Chairman of the Royal Aero Club, was unable to get close enough to shake hands with Capt. Alcock.

Among others present on the platform were Maj.-Genl. E. D. Swinton, Col. S. G. Partridge, and Lieut. C. P. Robertson (of the Air Ministry), Brig.-Genl. R. M. Groves (Deputy Chief of the Air Staff, and representing Maj.-Genl. J. E. B. Seely), Sir Andrew Caird, K.B.E. (Vice-Chairman of the Associated Newspapers, Ltd.), Brig.-Genl. Sir Capel Holden, and members of the Committee of the Royal Aero Club, Sir Trevor Dawson, Sir Vincent Caillard, and Sir Francis Barker (representing Messrs. Vickers, Ltd.), and Mr. and Mrs. Hawker.

After some difficulty Capt. Alcock and Lieut. Brown made their way to the car of Col. McClean. Genl. Groves then handed to them, amid renewed cheering, messages from Genl. Seely (Under-Secretary of State for the Air Department) and Maj.-Genl. Sir Hugh Trenchard.

Genl. Seely wrote :—

"This letter, which is brought by Genl. Groves, is to convey to you, Capt. Alcock and Lieut. Brown, the most cordial congratulations on your splendid achievement, not only on my own, but also on behalf of the Air Council, the Air Ministry, and, I know, your comrades of the Royal Air Force. We rejoice that your skill and courage surmounted all difficulties, and enabled you to cross direct from one continent to another by air. I hope to meet you personally, and in the meantime I know that you will be glad to receive this letter at the hands of Genl. Groves."

Genl. Trenchard's notes to each officer ran :—

"On behalf of the Royal Air Force I wish to congratulate you on the first successful crossing of the Atlantic Ocean by air without a stop."

The car then led the procession to the Royal Aero Club, outside which a large number of people had gathered to give Capt. Alcock and Lieut. Brown a very hearty reception. They were welcomed by Gen. Holden, who said he did not think either of them appreciated as yet what they had done, and it would take them some time to do so. "They appreciate that we appreciate what they have done, but they do not appreciate themselves what they have done," he added. It was one of the most remarkable feats of this century, and one which would be remembered as long as the world lasted. It was nine years since Blériot crossed the Channel, a distance of 20 miles. Everybody thought that a magnificent exploit at the time; but here they were welcoming men who had crossed nearly 2,000 miles.

Three cheers having been given for the airmen, there were repeated calls upon them to speak.

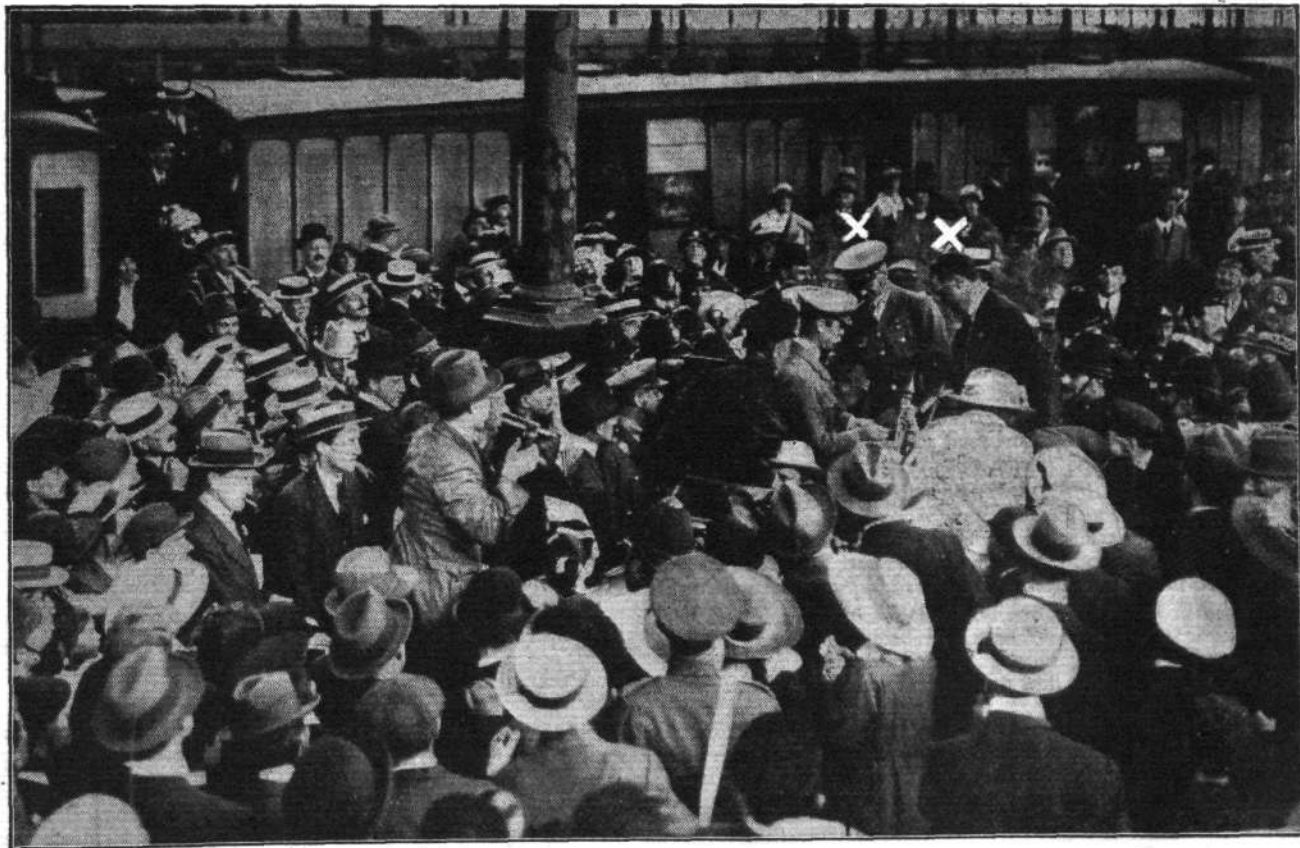
Capt. Alcock, standing on a chair, said :—

"I should like to thank Gen. Holden for the kind words he has said about Lieut. Brown and myself. I must say the flight has been quite straightforward. Although we had a little difficulty in keeping our course, Lieut. Brown did very well and steered a wonderful course. With regard to the flight itself all the credit is due to the machine, and particularly the engine—that is everything. If the engine went well there was nothing to prevent us getting across so long as Lieut. Brown was able to get his sights, and here we are."

Lieut. Brown, who also was loudly cheered, said :—

"Thank you very much indeed for your extremely kind welcome and for the kind words you have said about us. In a flight like this the essentials to success are, first, the design of the machine, for which our thanks are due to Messrs. Vickers and to the workmen who built it; second, the engines, the Rolls-Royce engines; third, the instruments with which the machine is equipped, and for these we have to thank the Air Ministry, who helped us to obtain the most modern apparatus which had been designed; and last, but not least, the pilot, Capt. Alcock. For with all these things the machine could not have made a successful flight without such a pilot as Capt. Alcock."

Afterwards Capt. Alcock and Lieut. Brown stepped out on to the balcony, where they were greeted with loud cheers by the crowds still waiting outside, Lieut. Brown ultimately driving off to Ealing where a further reception by the local authorities was gone through, whilst Capt. Alcock, after dinner



"Flight" Copyright.

THE ATLANTIC FLIGHT.—Arrival of Capt. Alcock and Lieut. Brown at Euston Station on Tuesday. Received by General Groves (Air Ministry), General Sir Capel Holden (Royal Aero Club), etc.

at the Club went to Olympia to witness the great boxing match.

The following is the story of the crossing as given to the *Daily Mail* by Capt. Alcock:—

"We have had a terrible journey.

The wonder is we are here at all. We scarcely saw the sun or the moon or the stars. For hours we saw none of them. The fog was very dense, and at times we had to descend to within 300 ft. of the sea.

For four hours the machine was covered in a sheet of ice carried by frozen sleet; at another time the fog was so dense that my speed indicator did not work, and for a few seconds it was very alarming.

We looped the loop, I do believe, and did a very steep spiral. We did some very comic 'stunts,' for I have had no sense of horizon.

The winds were favourable all the way: north-west and at times south-west. We said in Newfoundland we would do the trip in 6 hours, but we never thought we should. An hour and a half before we saw land we had no certain idea where we were, but we believed we were at Galway or thereabouts. Our delight in seeing Eashal Island and Turbot Island (5 miles west of Clifden) was great. People did not know who we were when we landed, and thought we were scouts on the look-out for the 'Vimy.'

We encountered no unforeseen conditions. We did not suffer from cold or exhaustion except when looking over the side; then the sleet chewed bits out of our faces. We drank coffee and ale and ate sandwiches and chocolate.

The flight has shown that the Atlantic flight is practicable, but I think it should be done not with an aeroplane or seaplane, but with a flying-boat. We had plenty of reserve fuel left, using only two-thirds of our supply.

The only thing that upset me was to see the machine at the end get damaged. From above, the bog looked like a lovely field, but the machine sank into it up to the axle and fell over on to her nose."

It certainly was unfortunate that what looked like a good meadow from above should have turned out to be a bog. Not only did the "Vimy" bury her nose in it but a R.A.F. machine which flew over from Oranmore to render assistance also came to grief. Later advices indicate that the Vickers machine is not so seriously injured as was at first supposed.

Although Capt. Alcock arrived in Ireland before anxiety had had time to develop some mystification was caused by the absence of any wireless messages. It appears, however, that the little airscrew driving the wireless generator blew off five minutes after leaving St. John's.

During the greater part of the flight of 1,950 miles the machine was at an average altitude of 4,000 ft. but at one time—about 6 a.m.—in an endeavour to get above the clouds and fog, it went up to 11,000 ft. Lieut. Brown was only able to take three readings for position, one from the sun, one from the moon and one from the Pole Star and Vega. On passing Signal Hill, Lieut. Brown set out a course for the ocean on 124 deg. compass course and at 3 a.m. from an observation on Polaris and Vega he found he was about 2 deg. south. He then set a course of 110 deg.

Between 4 and 5 a.m. the machine ran into a very thick fog bank, and the air speed indicator jammed, through sleet freezing on it, at 90 m.p.h. It was then that Capt. Alcock thinks the machine looped, at any rate it went into a steep spiral which only ended with the machine practically on its back about 50 ft. from the water. The machine was covered with ice, and it continually became necessary to chip ice off the instruments, etc.

Capt. Alcock says that he nursed the engines all the way, and had one-third of his petrol supply left when he landed. One of the exhaust pipes blew off, but otherwise there was no trouble from the engine installation.

Apparently the start from St. John's provided an anxious time for the onlookers. The machine had a hard job to get away with her heavy load. The aerodrome level was only 500 yards long, but the machine took off at 300 yards, and just managed to clear the trees and houses. However she climbed steadily if very slowly, and when she passed over the harbour at St. John's had reached a height of 1,000 ft.

CONGRATULATORY MESSAGES

From H.M. the King

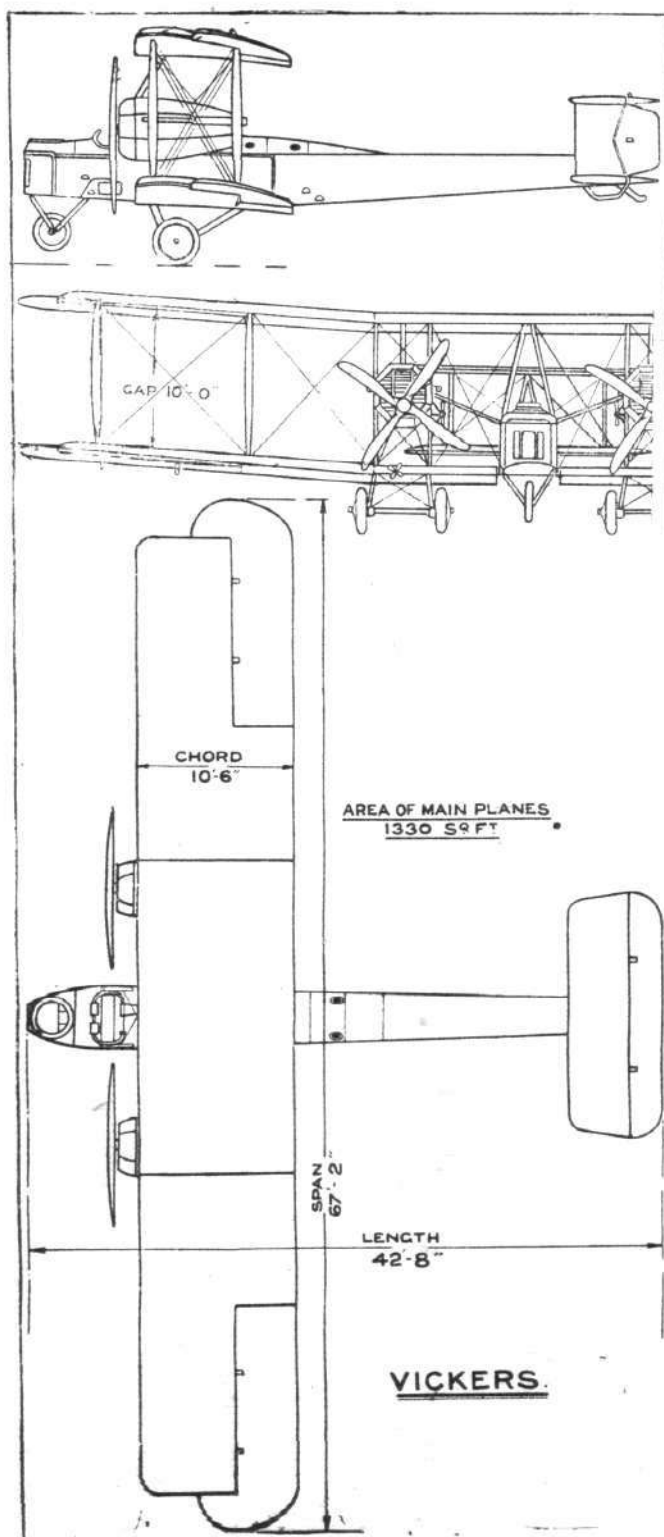
THE King was delighted to receive the welcome announcement that Capt. Alcock and Lieut. Brown have safely landed in Ireland after their Transatlantic flight. His Majesty wishes you to communicate at once with these officers, and to convey to them the King's warmest congratulations on the success of their splendid achievement.—
STAMFORDHAM.

Maj.-Gen. J. E. B. Seely,* Under-Secretary of State for Air

WARMEST congratulations on your wonderful achievement in accomplishing the first direct flight across the Atlantic. It is a splendid feat.

Maj.-Gen. Sir Hugh Trenchard, Chief of the Air Staff

THE Air Council and members of the Air Force send their heartiest congratulations to you and your colleague on your successful flight across the Atlantic.



THE VICKERS "VIMY-ROLLS."—Plan, side and front elevations to scale

Maj.-Gen. Sir F. H. Sykes, Controller of Civil Aviation

Most sincere congratulations on splendid success on first direct flight. It is a great triumph.

The Prime Minister (Mr. D. Lloyd George)

HEARTIEST congratulations to you and Lieut. Brown on your audacious and successful flight. It is a splendid achievement. I am especially delighted that two British officers who fought in the War should have been the first to link Europe and America in a single non-stop flight.

The President of the United States (Dr. Woodrow Wilson)

PLEASE accept for yourself and Lieut. Brown my warmest congratulations on your splendid feat.

The Lord Mayor of London (Sir Horace Marshall)

THE following telegram has been sent to Capt. Alcock and Lieut. Brown by Gen. Sykes, Controller-General of Civil Aviation: "I have much pleasure in conveying to you the following message, which has been received from the Lord Mayor of London: 'Will you kindly convey to Capt. Alcock and Lieut. Brown the sincere congratulations of the City of London on their splendid achievement, which fills the citizens with pride and satisfaction.'"

The Lord Mayor of Manchester—

MANCHESTER is proud of the high and historic achievement of two of her sons.

Col. Murray, United States Air Service

As representative of the United States Army Air Service in Great Britain, I take great pleasure in extending to you and your splendid crew our heartiest congratulations on your brilliant achievement and the successful consummation of your great historical flight.

Comdr. Towers

HEARTIEST congratulations from N.C. aeroplane division.

Mr. Claude Johnson, managing director of Rolls-Royce, Ltd., received the following telegram signed by Capt. Alcock and Lieut. Brown:—

Congratulations on performance of the two "Eagle" Rolls-Royce engines, which propelled the Vickers "Vimy" safely across the Atlantic.

In response to a telegram of congratulation to Capt. Alcock and Lieut. Whitten Brown from the editor of the *Daily Mail*, the following telegram was received from Galway:

"Many thanks for your congratulations. Thanks to the *Daily Mail*, another milestone in aviation has been passed. Hope to reach London to-morrow (Tuesday) night.

"ALCOCK AND BROWN."

Viscount Northcliffe has sent the following letter to Capt. Alcock:—

"My dear Alcock,—

"A very hearty welcome to the pioneer of direct Atlantic flight. Your journey with your brave companion, Whitten Brown, is a typical exhibition of British courage and organising efficiency.

"Just as in 1913, when I offered the prize, I felt that it would soon be won, so do I surely believe that your wonderful journey is a warning to cable monopolists and others to realise that within the next few years we shall be less dependent upon them unless they increase their wires and speed up. Your voyage was made more quickly than the average Press message of 1919. Moreover, I look forward with certainty to the time when London morning newspapers will be selling in New York in the evening, allowing for the difference between British and American time, and *vice versa* in regard to New York evening journals reaching London next day. Then we shall no longer suffer from the danger of garbled quotations due to telegraphic compression. Then, too, the American and British peoples will understand each other better as they are brought into closer daily touch.

"Illness prevents me from shaking you by the hand and personally presenting the prize. But I can assure you that your welcome will be equal to that of Hawker and his gallant American compeer, Read, whose great accomplishment has given us such valuable data for future Atlantic work.

"I rejoice at the good augury that you departed from and arrived at those two portions of the British Commonwealth, the happy and prosperous Dominion of Newfoundland and the future equally happy and prosperous Dominion of Ireland."

ITEMS

CAPT. ALCOCK brought the mail bag with him to London. At the Royal Aero Club he handed it to a representative of the *Daily Mail*, who took it to the G.P.O. The letters were delivered in London about 9 p.m. on Tuesday.

A RESOLUTION was on Tuesday introduced in the House of Representatives by Mr. La Guardia authorising President Wilson to confer the Congressional Medal of Honour upon Capt. Alcock and Lieut. Brown, and expressing the admiration of Congress for their daring feat in flying across the Atlantic.

CAPT. ALCOCK and Lieut. Brown will be the principal guests at a luncheon to be given by the *Daily Mail* at the Savoy

Hotel at 1 o'clock on Friday, when the £10,000 prize cheque will be presented.

THE Royal Aero Club will entertain Capt. Alcock and Lieut. Whitten Brown at a banquet at the Savoy Hotel on Monday. Members who wish to be present should apply as early as possible to the Royal Aero Club, Clifford Street, W. 1, for tickets.

A LOS ANGELES telegram states that Mr. Thomas Ince, the picture producer, has telegraphed to Capt. Alcock offering \$50,000 (£10,000) for a trans-Pacific flight, and has made a similar offer to Mr. Raynham.

At Rugby the train was met by two Grahame-White machines flown by Major R. H. Carr and Capt. Chamberlayne, and they escorted it to Euston. They then carried out a programme of interesting evolutions.

THE Rolls-Royce factory at Derby was closed on June 16, in recognition of the part which the workers took in making the engines of the Vimy.

THE Vickers employees at Brooklands also enjoyed a holiday.

THE successful crossing of the Atlantic provided a crowning achievement for Rolls-Royce engines. In this connection it may be noted that on November 11, 1918, when Armistice was declared, there were in possession of the Royal Air Force Rolls-Royce Aero engines, of a total horse-power of over 1,000,000-h.p., which far exceeded that of any other make of Aero engine in use.

WITHOUT detracting in any way from the wonderful performance of the Rolls-Royce engines, a word of praise may be accorded to the Claudel-Hobson carburettors which played their parts without a falter throughout the 16 trying hours. They thus added one more to the sheaf of laurels which they have won during the past few years.

SIMILARLY it is but just that mention should be made of the fact that the Rolls-Royce engines were lubricated with Wakefield Castrol "R." The crossing emphasised the great efficiency of this lubricant when working in low temperatures as at times various parts of the machine were almost covered with ice.

THE propellers for the machine were made by Messrs. Lang Propeller, Ltd., of Weybridge, who are delighted to have been associated with such an historic achievement.

To old readers of *FLIGHT* the name of Capt. J. Alcock, D.S.C., will be familiar. He first saw the light in Manchester in 1892, and was a born mechanic. After leaving school he spent a short period in a motor works near his home and then came to Brooklands. There he was taught to fly a Farman biplane by Mr. Maurice Ducrocq, and after taking his certificate as a pilot in 1912 he was flying a Sunbeam-engined Maurice Farman on which he made some lengthy—for those days—cross-country trips. He secured third place in the London-Manchester race of 1914. On the outbreak of war he joined the R.N.A.S., put in a long spell of instructing at Eastchurch, won a commission, and eventually found himself in the Eastern Mediterranean, engaged on bombing the Goeben, Constantinople, etc., deeds which were recognised by the D.S.C. It was while engaged on one of these bombing trips that his machine fell into the sea, leading to his capture by the Turks, and the suspension of his flying career until the Armistice released him. Then he got into touch with the aviation department of Messrs. Vickers, and when an entry was made for the *Daily Mail* prize he was selected as the pilot of the Vimy.

The name of Lieut. A. Whitten Brown is also known to *FLIGHT* readers, who will remember that he recently set forth in these pages some of his ideas on navigation which have now been so excellently proved in practice. He was born in Glasgow in 1886, his parents being American citizens. An engineer by profession, he received his practical training with the British Westinghouse Co., now allied with the Vickers group, and becoming interested in flying studied aerial navigation as applied to surveying. He enlisted in the University and Public Schools Corps in 1914, later receiving a commission in the Manchester Regiment, with which he served in France in 1915. Later he transferred to the R.F.C. as observer, and was wounded and taken prisoner. He was interned in Switzerland and repatriated in 1917. After his return to England he spent some time instructing and was then engaged in the engine section of the Aircraft Production Department. He has done quite a deal of flying at home stations.

THE VICTORY AERIAL DERBY

AFTER an interval of five years, the Aerial Derby is to be flown again, on Saturday next, June 21.

For this year's event the following machines have been entered :—

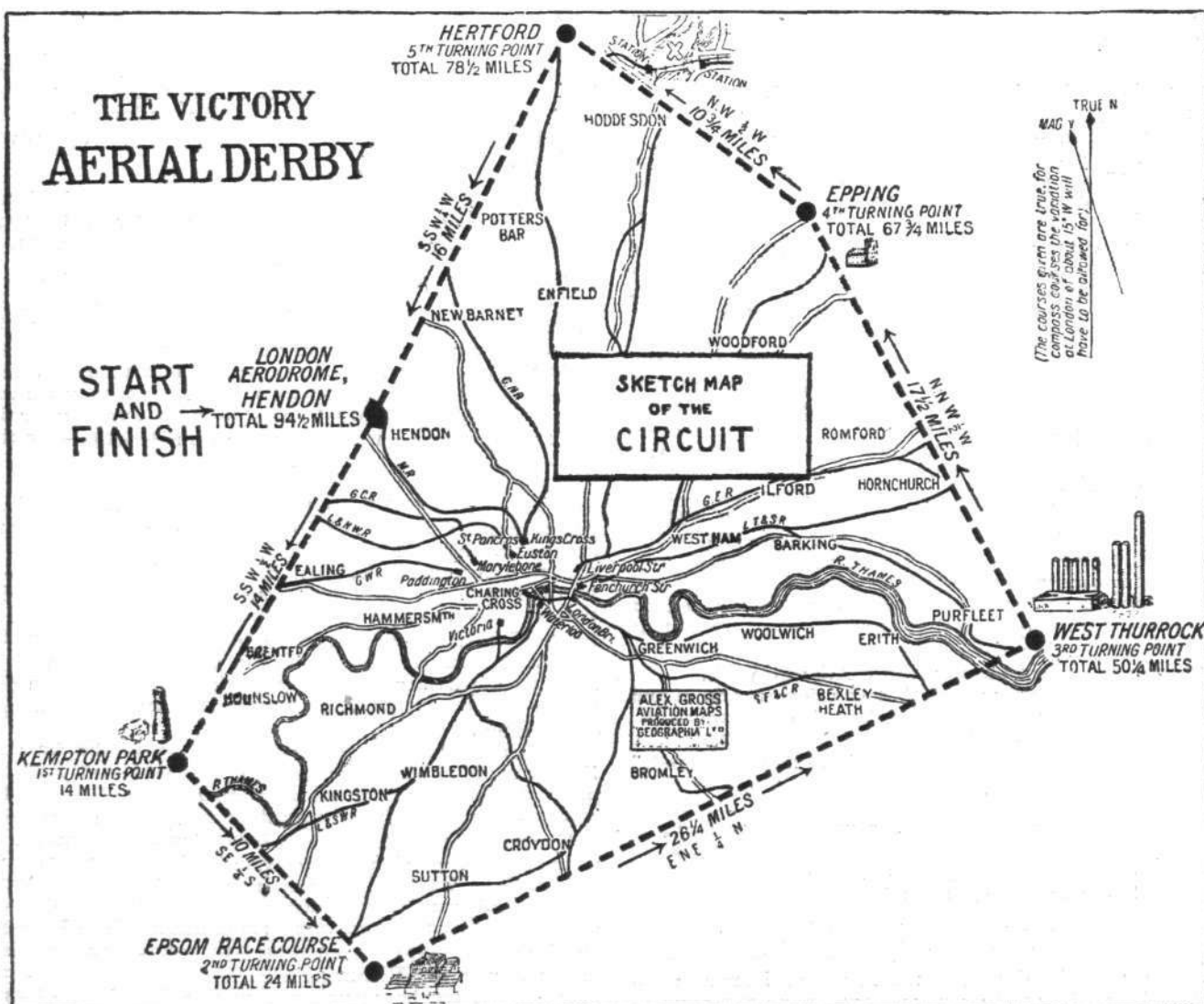
by the Grahame-White Co., Ltd., under the auspices of the Royal Aero Club. The course will be the same as before (see accompanying maps), but in view of the greater speed of modern aeroplanes, the circuit will have to be covered twice.

Official No.	Pilot.	Machine.	Engine.	Approx. Speed m.p.h.
1	Clifford B. Prodger	B.A.T. Bantam	170 h.p. A.B.C. Wasp	120
2	Capt. P. R. T. Chamberlayne ..	Grahame-White Bantam ..	80 h.p. Le Rhone	90
3	Maj. C. Draper, D.S.O.	B.A.T. (Sporting Two-seater) ..	200 h.p. A.B.C. Wasp II	125
4	Lieut.-Col. G. L. P. Henderson, A.F.C., M.C.	Martinsyde F. 4	250 h.p. Rolls-Royce Falcon II ..	145
5	Maj. R. H. Carr, A.F.C., D.C.M.	Grahame-White Bantam ..	80 h.p. Le Rhone	90
7	Capt. G. Gathergood, A.F.C. ..	Airco 4 R.	450 h.p. Napier Lion	140
8	Marcus D. Manton	Airco 4	375 h.p. Rolls-Royce Eagle VIII ..	130
9	Capt. H. J. Saint, D.S.O.	Airco 9 (three-seater)	240 h.p. Siddeley Puma	111
10	Lieut. Robert Nisbet	Martinsyde F. 4	275 h.p. Rolls-Royce Falcon III ..	144
11	Maj. L. R. Tait-Cox	Nieuport L.C. 1	320 h.p. A.B.C. Dragonfly	143
12	Maj. C. H. C. Smith, D.S.O. ..	Bristol Monoplane	110 h.p. Le Rhone	110
14	Capt. H. A. Hammersley	Avro Baby	35 h.p. Green	70
15	Lieut. C. Turner, A.F.C.	B.A.T. Commercial Five-seater ..	375 h.p. Rolls-Royce Eagle VIII ..	115
16	Capt. C. R. Vaughan	B.A.T. Bantam	170 h.p. A.B.C. Wasp	120
17	H. G. Hawker	Sopwith	To be announced later.	—
18	Capt. J. Alcock, D.S.O.	Vickers	To be announced later	—

The prizes will be : The *Daily Mail* gold trophy (value 200 guineas) and the "Shell" prize of £500, for the winner. The second man gets a "Shell" trophy and £100. There will also be a sealed handicap with three "Shell" trophies and "Shell" prizes of £100, £50 and £25 for the first, second and third respectively. As in previous years the race will be organised

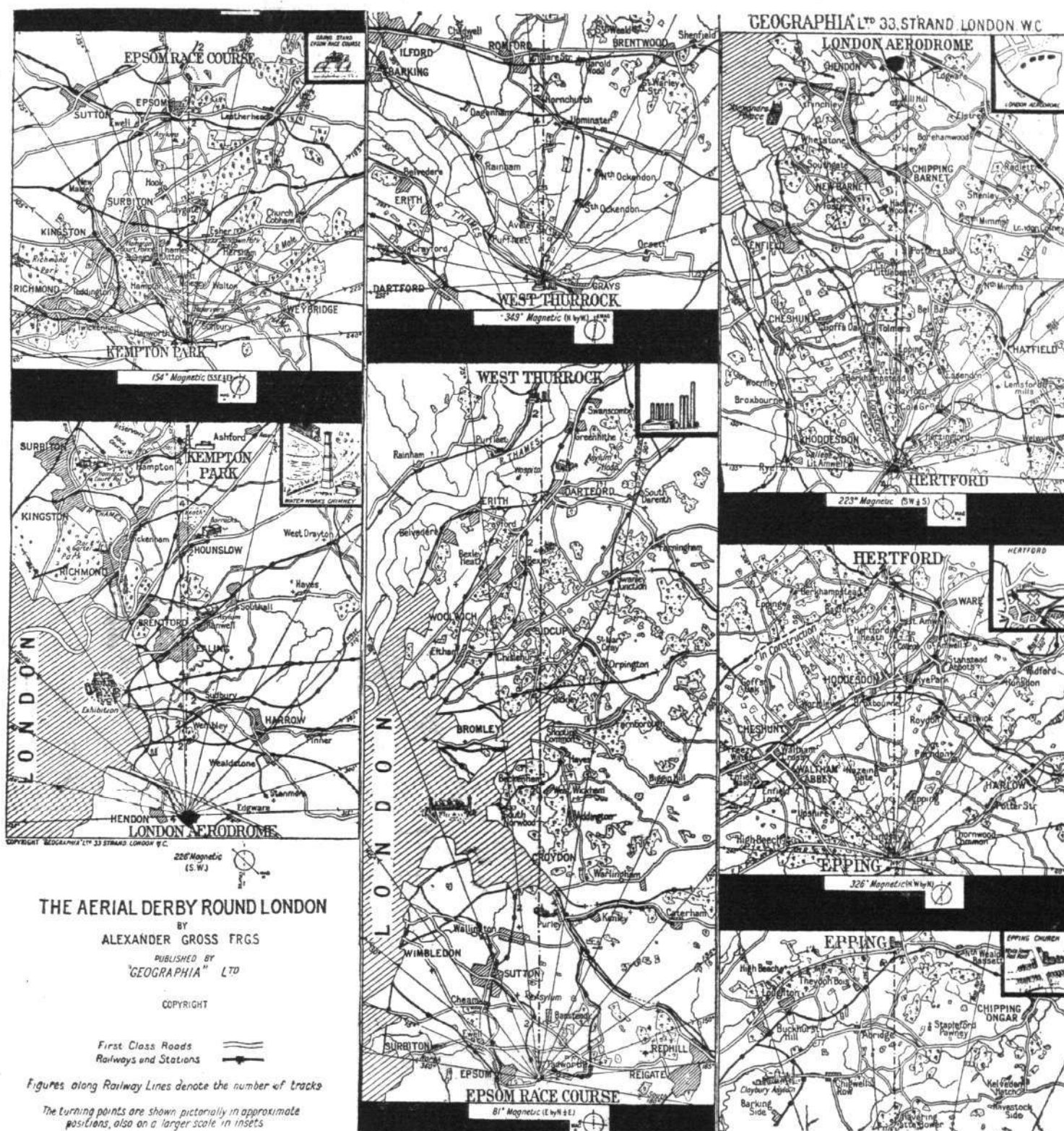
In regard to the start and finish of the race, the machines will leave the starting line opposite the Paddock Enclosure at the London Aerodrome, Hendon, at half-minute intervals, the slowest machine starting first at 3.30 p.m.

The competitors should, on the first circuit, pass the first turning point at Kempton Park (Waterworks chimney) at



Reduced map available for use by aviators competing in the Victory Aerial Derby, showing each section distinctly. The original of the map is about 5 ft. 6 ins. in length, on which the rivers, streams, lakes and reservoirs are coloured most conspicuously in blue, woods and parks in green. The map is designed by Alexander Gross, F.R.G.S., and published by "Geographia," Ltd., Fleet Street.

THE VICTORY AERIAL DERBY



Sketch map of the circuit for the Fourth Aerial Derby on Saturday, June 21, showing the districts over which the competitors will be flying twice. The controls over which the competitors must pass at the various turning points are defined as follows

KEMPTON PARK.—Turning point is square chimney, 230 ft. high, just north of Kempton Railway Station, very dark brown brick, with low building, filter beds and connecting reservoir. In the neighbourhood is a lower chimney (round), with two very large reservoirs.

EPSOM RACECOURSE.—Turning point is the Grand Stand which is at the top of Epsom Downs, making a conspicuous landmark.

WEST THURROCK.—Turning point is the cement works on north bank of the Thames near top of the bend three miles east of Purfleet and slightly to the east of West Thurrock Church. The works consist of a long rectangular buff-coloured building, with a large diagonal white cross on the roof. Five factory chimneys stand in line at equal distances behind the building, flanked by two taller chimneys and a very high one further to the right.

EPPING.—Turning point is Epping Church in centre of Epping village on west side of London Road. 200 yards south of church is a solitary water tower 120 ft. high.

HERTFORD.—Turning point is the large field immediately north of the town adjoining the railway stations, and enclosed on the north, east and west by streams. The actual point will be marked by a large white cross.

3.36 p.m. The second turning point at Epsom (Grand Stand on racecourse) will be passed at 3.40 p.m., and the pilots will then turn at the third point, West Thurrock (white cross on cement works and tall factory chimneys), at about 3.51 p.m. The fourth turning point, Epsom (Parish Church tower), will be passed at 3.59 p.m., and the fifth turning point, at Hertford (white cross on Hartham Meadow), at 4.3 p.m.

The machines should pass over the Hendon Aerodrome, entering the second circuit at 4.10 p.m., and the leading machines may be expected at the turning points again on the second round as follows:—

Kempton Park	4.16 p.m.	Epping ..	4.39 p.m.
Epsom ..	4.20 p.m.	Hertford ..	4.43 p.m.
West Thurrock ..	4.31 p.m.		

The winner, who is the pilot that will have completed the course in the fastest time, is expected to cross the finishing line at the Hendon Aerodrome about 4.50 p.m.

The first Aerial Derby, it may be remembered, was flown on June 8, 1912, over a course of 81 miles, starting from the London Aerodrome, Hendon. The turning points were: Kempton Park, Esher Station, Russell Hill, Purley, Purfleet, Epping, and High Barnet. Out of the fifteen pilots entered for this race only seven started, and out of these only four completed the course. The winner of the race

was Mr. T. O. M. Sopwith, who was flying a 70 h.p. Bleriot monoplane. He completed the course in 1 hr. 23 mins. 8½ secs.

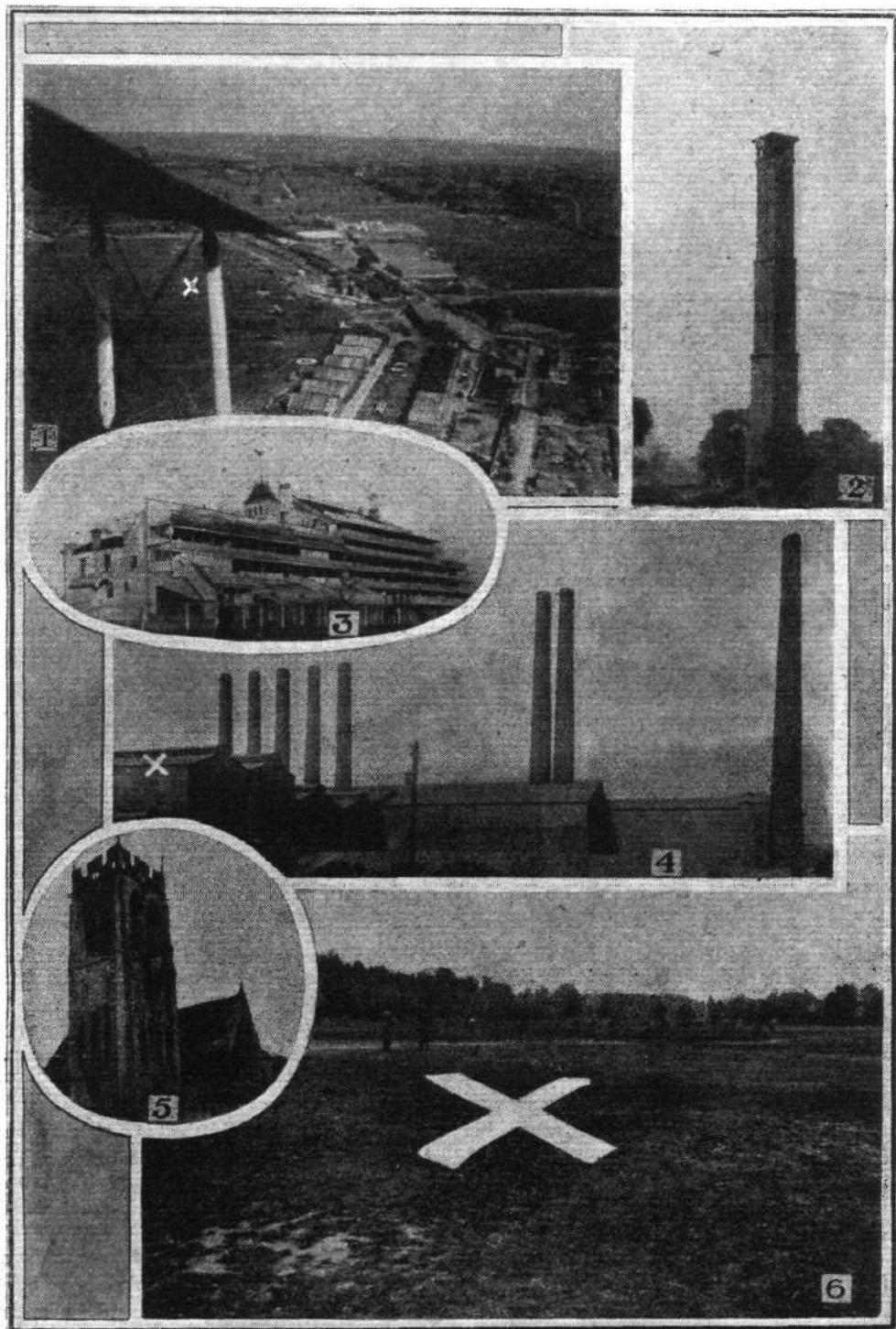
The second Aerial Derby was held on September 20, 1913. The course was slightly different from that of the previous year, the turning points being: Kempton Park, Epsom Racecourse, West Thurrock, Epping, and Hertford. Out of the fifteen machines entered eleven started and nine completed the course. The race was won by the late Mr. Gustav Hamel, who was flying an 80 h.p. Morane-Saulnier monoplane. Mr. Hamel covered the distance of 94½ miles in 1 hr. 15 mins. 49-secs.

The third Aerial Derby took place on June 6, 1914, the course being the same as that of the previous year. Twenty-one machines had been entered, out of which eleven started. Out of these only five completed the course. The race was won by Walter L. Brock, whose time was 1 hr. 18 mins. 54 secs.

It should be pointed out that where a firm has entered more than one machine, the allocation of pilots may not necessarily be that shown in the table, as changes may be made at the last moment. As far as possible, however, we have endeavoured to render the table correctly.

This year's race should prove of great interest, not only because of the high speed of the modern aeroplane, but also on account of the fact that several of the machines entered are quite new, while others, although having been in existence

The Victory Aerial Derby.—The turning points. 1. The London Aerodrome, Hendon, the position of No. 1 pylon is indicated by the 'x' (start and finish); 2. Kempton Park, chimney at water-works; 3. Epsom Grand Stand; 4. West Thurrock, factory chimneys, cross on roof of buildings; 5. Epping, church; 6. Hertford, large white cross in field north of town.



for some time, are not generally known to the public. We have not the space to devote to a lengthy description of each machine this week, but several of them have already been dealt with, more or less fully, in previous issues of *FLIGHT*, so that a brief reference to the machines will suffice.

Each aeroplane will have its official number boldly displayed on the under surface of the bottom planes, on the upper surface of the top planes, and on both sides of the rudder, which will enable the public congregating along the route to identify the competing aviators.

Of the four B.A.T. machines entered, two have already been fully described in *FLIGHT*. Scale drawings and a detailed illustrated description of the F.K. 26, 375 h.p. Rolls-Royce Eagle, passenger-carrying biplane, were published in our issue of April 17, 1919, while the B.A.T. Bantam was similarly dealt with on May 22, 1919. Of the latter type, two machines have been entered, but as they are identical no separate description is required. Both are fitted with 170 h.p. A.B.C. Wasp engines. The fourth B.A.T., the F.K. 27, is an entirely new type. In a general way it resembles the B.A.T. Bantam, but it is a two-seater, with the two seats side by side, but slightly staggered in relation to one another. It is fitted with one of the latest A.B.C. Wasp engines, in which the power has been increased from 170 h.p. to about 200 h.p. As the machine has not yet been flown in public, it is more or less of a "dark horse," and may provide some surprises.

As will be seen from the accompanying table, two Grahame-White Bantams, 80 h.p. Le Rhone engines, have been entered, both of the same type. This machine was fully described and illustrated in our issue of April 10, 1919.

The "Airco" machines will be known to our readers from the Airco "Milestones," published in our issue of January 9, 1919. There are some slight alterations with regard to the engines fitted and the seating accommodation. Thus the Airco 4 has a 450 h.p. Napier Lion engine instead of the customary Rolls-Royce, a fact which will slightly alter the appearance of the nose of the machine. In other respects, however, the machine is practically the same as the older models. Similarly, one of the Airco 9's entered, fitted with a 230 h.p. Siddeley Puma engine, has three seats instead of two, having been converted for passenger work. The second Airco 4 has a 375 h.p. Rolls-Royce Eagle engine.

The two Martinsyde machines, although, so far as we can gather, being of standard type, will be unknown to many of

the visitors to Hendon, and should provide some excitement, as they are extremely fast, the F 4 holding the speed record for the London-Paris flight, which it did in 1 hr. 15 mins. The speed at low altitudes is, we believe, about 145 m.p.h. Both are fitted with Rolls-Royce engines.

The Nieuport Nighthawk is another machine not generally known, although it has now been flying for a good many months. Photographs and a brief description of the Nighthawk were published in our issue of January 16, 1919. It is a single-seater scout with a 320 h.p. A.B.C. Dragonfly radial engine. It is a very fast machine, and may be expected to put up a very fine performance.

Of the remaining machines, the Bristol monoplane was dealt with in the Bristol "Milestones" in our issue of January 23, 1919. This machine, which has a 110 h.p. Le Rhone engine, will be easily recognised, especially on account of its crescent-shaped wings.

The little Avro Baby is a post-War production, which has undergone its flying tests during the last couple of months. It is a sporting type of machine with a 35-40 h.p. Green engine. It will, therefore, probably be the lowest-powered machine in the race, and allowance should be made for this in judging its speed compared with that of other, higher-powered, machines. We have no doubt that its appearance at Hendon will appeal to a number of sportsmen anxious to pilot their own machine.

At the time of going to press, it had not been definitely decided what machine Mr. Hawker will fly, but it will probably be the little "Parasol" Sopwith monoplane, 130 h.p. Clerget engine, on which he did such excellent flying at Hendon recently. This machine may be recognised by its planes, which are slightly swept back.

The machine to be flown by Capt. J. Alcock will, in all probability, be a Vickers "Vimy-Commercial," with two Rolls-Royce engines. One of these machines paid a visit to Hendon at the recent Hawker reception there. As the only twin-engined machine, the Vickers should be easy to identify.

We expect the race to be well worth seeing, and would advise all those of our readers who can possibly do so to make an effort to see the race, either from Hendon itself, where, of course, a much closer view of the machines may be obtained, or from one of the turning points, where the machines must come down to a height sufficiently low to enable them to be identified.

PREVIOUS WINNERS OF THE AERIAL DERBY



Mr. T. O. M. Sopwith



The late Gustave Hamel



Mr. W. L. Brock

PORTRAITS OF PILOTS AND IDENTIFICATION DIAGRAMMS OF MACHINES

Our silhouettes of the various machines are approximately relative in size to each other

No. 1



Pilot:
Mr. C. B. Prodger



No. 1. The B.A.T. Bantam,
170 h.p. A.B.C. Wasp.

This machine may be identified by the fact that the wings are not staggered, by its round *monocoque* body, and by the wide spacing of the landing wheels.

No. 2. The Grahame-White
Bantam, 80 h.p. Le Rhone,

is a very small machine with top plane slightly larger than bottom one. Its *fuselage* is painted yellow and its wings blue.

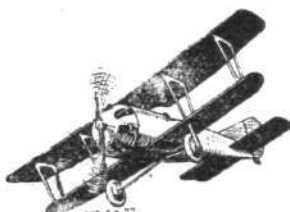


No. 2



Pilot:
Capt. P. R. T. Chamberlayne

No. 3



Pilot:
Maj. C. Draper



No. 3. The B.A.T. Sporting Two-Seater, 200 h.p. A.B.C. Wasp

is very similar to No. 1, but its struts are of a different shape, and its top plane is larger in span and chord than the bottom one.

No. 4. The Martinsyde F. 4,
250 h.p. Rolls-Royce Falcon II

is a fairly large machine, and very fast indeed. It has a radiator in the nose of a very deep body, and has its wing tips heavily raked.



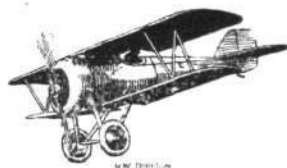
No. 4



Pilot:
Lieut.-Col. G. L. P. Henderson

PORTRAITS OF PILOTS AND IDENTIFICATION DIAGRAMMS OF MACHINES

No. 5



Pilot :
Maj. R. H. Carr



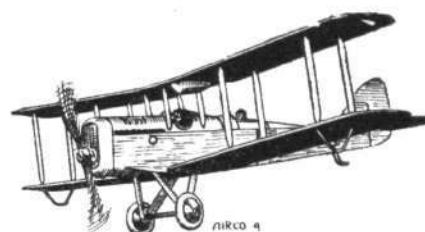
No. 5. The Grahame-White
Bantam, 80 h.p. Le Rhone
is identical with No. 2.

No. 7. The Airco 4 R, 450 h.p.
Napier Lion.

This machine is very similar to the standard Airco 4, except for the engine cowling, which is slightly different on account of the shape of the Napier engine.



No. 7



Pilot :
Capt. G. Gathergood

No. 8



Pilot :
Mr. M. D. Manton



No. 8. The Airco 4, 375 h.p. Rolls-
Royce Eagle
is the standard machine, and will,
therefore, be well known.

No. 9. The Airco 9, 230 h.p.
Siddley Puma.

This is the standard Airco 9, with the exception that an extra seat has been fitted. It may be identified by the tapering, pointed nose of its fuselage.



No. 9



Pilot :
Capt. H. J. Saint

PORTRAITS OF PILOTS AND IDENTIFICATION DIAGRAMS OF MACHINES

No. 10



Pilot :
Lieut. Robert Nisbet

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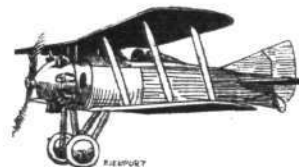
No. 10. The Martinsyde F. 4,
275 h.p. Rolls-Royce Falcon III
is practically identical with No. 4,
but has a later type engine.

No. 11. The Nieuport Nighthawk,
320 h.p. A.B.C. Dragonfly

is a very fast single-seater, and is chiefly characteristic on account of the peculiar shape of its rudder. This machine is somewhat similar to the B.A.T. Bantams, but may be distinguished from them by having staggered planes.



No. 11



Pilot :
Maj. L. R. Tait-Cox

No. 12



Pilot :
Maj. C. H. C. Smith



No. 12. The Bristol Monoplane,
110 h.p. Le Rhone

is easily identified by its *monocoque*-
shape body and crescent-shaped wings.

No. 14. The Avro Baby, 35-40 h.p.
Green

is a small machine like the G.W. Bantams, but may be distinguished from these by its deeper body and by the radiator mounted in the nose of the body. Also its wings are of equal size.



No. 14



Pilot :
Capt. H. A. Hammersley

PORTRAITS OF PILOTS AND IDENTIFICATION DIAGRAMMS OF MACHINES

No. 15



Pilot :
Lieut. C. Turner



No. 15. The B.A.T. Five-Seater,
375 h.p. Rolls-Royce Eagle.

This machine is very distinctive on account of its deep body. It is a fairly large machine, and is painted white.

No. 16. The B.A.T. Bantam,
170 h.p. A.B.C. Wasp

is identical with No. 1.

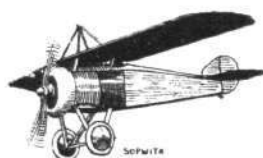


No. 16



Pilot :
Capt. C. R. Vaughan

No. 17



Pilot :
Mr. H. G. Hawker



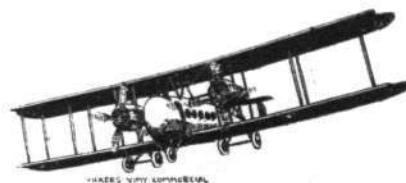
No. 17. The Sopwith Monoplane.
130 h.p. Clerget

may be distinguished from the Bristol monoplane by having a flat-sided body. Also its wings, although sloped back, are not crescent shape.

No. 18. The Vickers



No. 18



Pilot :
Capt. J. Alcock

THE INDEPENDENT FORCE, R.A.F., DINNER

ON Saturday evening last a dinner to the members of the I.A.F. took place at the Savoy Hotel, when Maj.-Gen. Sir Hugh M. Trenchard, K.C.B., D.S.O., Chief of the Air Staff, presided; Prince Albert, who is a member of the R.A.F., attending the function.

Amongst those present were :—

Colonels C. L. Newall, C.M.G., C.B.E., A.M., C. L. Courtney, C.B.E., D.S.O., Heneage, M.V.O., H. Donaldson-Hudson, D.S.O., J. E. A. Baldwin, D.S.O., O.B.E., M. G. Christie, C.M.G., D.S.O., M.C., R. H. Collier, D.S.O., O.B.E., F. H. L. Errington, C.B., V.D., M. Simon, D.S.O., E. B. Gordon, C.M.G., D.S.O., Landon, D.S.O., O.B.E., W. D. Beatty, D.S.O.

Majors Burt, O.B.E., Ryan, C.B.E., D. V. Smith, M.C., Quinell, D.F.C., the Hon. M. Baring, M.V.O., O.B.E., W. G. P. Young, O.B.E., Macnab, Gray, M.C., D.F.C., Nicholl, O.B.E., Hume, D.S.O., Paul, O.B.E., M.C., Burge, O.B.E., Pattinson, D.S.O., D.F.C., M.C., L. Greig, M.V.O., L. G. Reynolds, G. M. Miller, D.S.O., Read, M.C.

Captains Marson, Bygrave, Stammers, O.B.E., Dick-Cleland, H. S. P. Walmsley, M.C., Farrington, D.S.O., Terrell, R. P. Ward, M.C., D.F.C., Bivar, Hawley, N. C. Lloyd, Tottenham T. G. Gordon, M.B.E., J. Wood, Gammon, D.F.C., Waterous, Dance, Pearson, Harding, Silley, M.C., D.F.C., Collett.

Lieutenants R. Brie, Macpherson, Walters, Williams, M.C., H. C. Allen, D. F. Brooks, Martin, Harris, Brown, E. F. van der Riet, D.F.C., Osborne, J. W. Richards, Du Gray, M. L. P. Leroy, R. F. Cook, Stevenson, Beck, R. A. Martin, Walker, Griffith, Macdonald, Armstrong, Hinchcliffe, Henderson, Lievett, Tarras, Fox, M.C., D.F.C., Oliver, Broadbent, J. Wrighton, Bell, Marshall, Chrystall, G. H. Power, F. H. Wilcockson, Trench, Tanqueray, Sawyer, O'Donnell, Trimnell.

Immediately upon assembling, Sir Hugh Trenchard, amidst great enthusiasm, read the telegram just received by the Air Ministry announcing the start of Capt. Alcock and Lieut. Brown on the Vickers Vimy-Rolls Royce for the Atlantic flight.

The toast of "The King" having been duly honoured, Gen. Trenchard proposed the toast of "The Independent Force." He said :—

"It is my duty to propose the toast of 'The Independent Force,' and what a Force it was—absolutely unique in its character, and the only Force that has ever operated that was not Navy or Army, but this new Air Force. Though unique, it is at the same time imbued with the spirit and feelings that animated the whole of the Navy and Army elsewhere—throughout the world—and that spirit was to finish the War quickly without any regard to your own safety.

"This Force was really the 8th Brigade clothed in another name. It was the 8th Brigade, and the squadrons forming that Brigade, that started this work, and they were the

people who had to overcome the major difficulties, and that anybody with less determination, energy and tact than possessed by the personnel of that 8th Brigade would have failed to surmount. From the period October 11, 1917, to the formation of the Independent Force they dropped no less than 107 tons of bombs. They carried out 55 day raids and 87 night raids and the total number of bombs dropped was 2,370. They attacked no less than 156 different targets, and they carried out one raid of 50 miles; 51 raids of 100 miles, 101 raids of 150 miles, 151 raids of 200 miles, and what had they got to do it with. I feel sure you will give it a cheer when we mention the names of the squadrons who did this work in the winter. There was No. 55 Squadron with their D.H. 4's, commanded by Maj. Baldwin, as he then was; there was also No. 100 Squadron with F.E.'s—the first purely night-flying squadron of the R.F.C. to come out to France—who were commanded by the then Maj. Christie. Then there was that great R.N.A.S. Squadron, No. 216, hastily raised and pushed out from England with great despatch, commanded by Squadron-Commander Savory, and later, but not until May, that No. 99 Squadron arrived to help them, commanded by Maj. Pattinson. There was also the Medical Officer, Capt. Gardener-Hill, and the Aircraft Park No. 6, under Maj. Hooper.

"The 41st Wing was formed on October 11; it became the 8th Brigade on December 28, the last work I did when I was commanding the whole Force in France in 1917—I left it the next day. Very few people realise the strain that is thrown upon the pilots and observers, and also on to those Flight, Squadron and Wing Commanders, as well as Brigadiers, by long-range bombing. Do you not all know that when the weather is bad day after day, as I said on your behalf to Mr. Hawker the other day, that the strain of waiting, waiting and waiting for the right weather that never seems to come makes it a strain so hard that only the indomitable grit that members of this Force had enabled them to carry out their work in spite of all.

"Now I will give you a few figures of what they did from the day they became the Independent Force, on June 6 :—

"553 tons of bombs were dropped—the total number of bombs being over 12,000. 205 day raids were carried out, and 373 night raids. They also carried out: 325 raids of 50 miles, 142 raids of 100 miles, 70 raids of 150 miles, 9 raids of 200 miles; and who did this work, in addition to those squadrons we have mentioned before? It was these same squadrons, plus No. 104 Squadron, under the command of Maj. Quinell, No. 97 under Maj. Albrecht, No. 215 under Maj. Fleming Jones, No. 115 under Maj. Gardener, No. 110 under Maj. Nicol, and at the end came a squadron of Sopwith Camels, No. 45, under the command of Maj. Crook. I would also mention the great establishment, No. 3 A.D., at Courban, under the command of Col. Warwick Wright, and later under Col. Collier.



THE INDEPENDENT AIR FORCE DINNER AT THE SAVOY HOTEL: Left to right, Col. Newall, C.M.G., C.B.E., H.R.H. Prince Albert, K.G., Major-General Sir Hugh M. Trenchard, K.C.B., D.S.O. (in the chair), and Col. C. L. Courtney, C.B.E., D.S.O.

"The honours and awards gained were—*Officers*—Royal Air Force, 58; attached officers, 16; *Other Ranks*, Royal Air Force, 49; attached R.A.F., 28; in addition to mentions.

"I have often been asked whether night bombing was not preferable to day bombing and was it not more economical in life. The answer always was, if night bombing only was done, you lost half the effect of that night bombing, and all the effect of day bombing on the morale of the nation we were hitting. If a place is only bombed by night the people are able to pursue their ordinary avocations by day, but if bombing also takes place during the day, the people immediately say how disgraceful the defences are, and what funks their own people are, and the result is that they get more and more rattled. Night bombing is bad enough, but people cannot work if they are bombed both day and night—it is impossible. The one single purpose this Force had in view was that if you could help to win the War half a day earlier, even if you were all lost, your casualties were small compared with the overwhelming benefit of avoiding those enormous casualties to the Army fighting on the ground. And that is what you all felt—could we save and help the Army and our great Infantry on the ground?"

"Another point I must touch upon, is, when was the right moment to begin to bomb Germany. Well—bombing of Germany was a luxury until we were strong enough on the Western Front to hold the whole German aviation. When this was done, it became an absolute necessity. I think you will agree that the glorious command under the command of Gen. Salmond—my old friend—in the North not only held the German aviation but beat it. Then was the time to bomb Germany.

"We must not forget that with this Independent Force were the great Administrative Services attached to it from the Army and who belonged to the Army. They were as much part and parcel of the Independent Force as the officers and men of the R.A.F. They were also imbued with the same spirit of making the Force a great and potent weapon to hit Germany. I would also include in this, that great 8th Canadian Stationary Hospital, under Col. Munroe.

"In conclusion I would say with what pride I look back on this time, and the honour it was to be allowed to be your Commander—I would rather put it, your representative or your headpiece—during those eventful months."

Col. C. L. W. Newall, C.M.G., in replying to the toast for the 8th Brigade, said that what he would like to emphasise was what Gen. Trenchard had done for the Brigade. It was the knowledge which they had that he was behind them which urged them on. It was that which was the foundation of all the work they were able to carry through. He could never forget the receipt of the telegram from Gen. Trenchard in which he told them it was the 8th Brigade which started the I.A.F. It was the greatest incentive for further efforts they could have.

Col. Newall then asked them to rise to the toast of their chief, Maj.-Gen. Sir H. M. Trenchard, which was greeted in rousing song.

Gen. Trenchard, in replying, said :—

"I feel sure what is interesting you more and more is what can we do to help you in the future. We have been long and slow in making the Permanent Service. I ask you, on behalf of all the people who are working hard, to forget what is to you apparently inexplicable delay, and I ask you still more to put a little more trust in the powers that be, because I know now from personal experience how much they and I have your interests at heart, and our one desire is that in two or three years' time the Air Force shall have as great a reputation in Peace as it had in War, for being a Force that is out to play the game, and win.

"I am speaking unofficially—as far as it is possible for me to speak at all unofficially at present on this subject—and

I would like to say that what I am saying of the officers and to the officers, I am doing just as much for the rank and file, and I hope shortly, when we have finished the labour we are now on, to be able to go round more and more the aerodromes both in France and England, and tell the officers and men what has been done.

"The re-organisation of the Royal Air Force into a permanent Fighting Service has made it necessary to draw up new conditions of service for the officers and for the men of the Force. It is necessary that the future Air Force officer list shall be composed chiefly of officers holding temporary commissions, and officers holding permanent commissions. The reason for this discrimination is two-fold. In the first place it is necessary to limit the number of officers holding permanent commissions to the maximum number to whom a permanent and paying career can be offered. In the second place, it is desired to avoid in the future the conditions which

involve the retention of permanent commissions by officers who have no chance of further advancement or useful employment, and are simply holding on for a pension.

"Officers given temporary commissions in the Royal Air Force will be drawn from civil life, and will be asked to serve for periods varying from three to four years inclusive of time necessary for training. Their rates of pay while serving will be the same as for permanent officers, but they will get in lieu of pension on the termination of their active service a gratuity of £75 for each year served. On completion of this active service, these officers pass automatically to the reserve, the terms of service for which will be published shortly.

"In addition to officers holding temporary commissions and officers holding permanent commissions, there will also be included in the officer personnel of the future Air Force a certain number of Naval and Military officers of suitable ages, who will be seconded from their parent service. This interchange of officers is proposed with a view to enabling



Front of the menu card of the Independent Air Force Dinner.

R.A.F. to work in close touch with Navy and Army. - While seconded to the Air Force these officers will, of course, be entitled to Air Force rates of pay, etc.

"It is impossible at present to tell each one of you whether you are going to be given a permanent commission or a temporary commission under these terms.

"One of the objects of this scheme is that it is intended eventually that the Air Force shall be controlled by Air Force officers, who have been taught from the earliest age in the Air Force colleges.

"I have been asked by various officers at different times whether you will be able to live on your pay in the new Air Force. I want to say definitely now, that in my opinion, yes, you can. The pay and pension scheme for the permanent officers hang together, and you will, I hope, understand when I cannot tell you more at present about it, that all who are dealing with this subject realise the conditions and the type of work you are going to be called upon to perform, and I must ask you to have faith for a little longer, and that I sincerely hope that before the end of this month, we shall be able to make a more definite statement on this subject. I am telling you this owing to the unavoidable delay in getting out the permanent list, and the terms of service.

"It is hoped that those officers who are not chosen for permanent commissions, will be willing to serve from two to four years on a temporary commission.

"As soon as circumstances permit, permanent stations will be established, but this will take time. The Ministry hopes, subject to exigencies, to keep units together, and to give them a definite identity, so that they will be a home for officers and men, just as the famous British regiments are. I ask you to picture to yourselves—as I hope to see it even in my time—permanent stations with their cricket grounds, tennis courts, polo grounds, etc., with comfortable living conditions for officers and men, in which all can take a pride, and an interest, and feel that they have got a home.

"The bases of this organisation are the economical use of officer personnel in Peace, combined with the power of rapid expansion for War. Officers who make it their career will find it at least as good as that of the Navy or Army, whilst those who accept temporary service will get the fullest possible opportunities to find subsequent employment in civil life. The transition period through which the Air Force must pass is measured by the time it will take to train the cadets for the future service, i.e., four years. It is intended to commemorate by their original title a certain number of the great squadrons who made traditions for themselves during the War, so that those officers and men joining in the future will then feel that they are joining a squadron with a tradition they must strive to live up to.

"In publishing the first batch of permanent commissions, the Air Ministry wish it also to be known that only a limited number have been awarded. Owing to the difficulty at present experienced in obtaining recommendations from the far distant theatres of War, it will take some considerable

time before the whole of the awards (within the number allowed) can be dealt with.

"It is also intended to ask officers who are not included in the above list, to apply for temporary commissions. It may be that during the time these officers are holding temporary commissions the number of permanent commissions will fall below the number desired. In these circumstances officers serving on temporary engagements will be eligible for the permanent Force. Officers who were demobilised in the early days after the Armistice, owing to the uncertainty of the future, may also be asked to volunteer for temporary commissions. It is intended to set up a Selection Board at the Air Ministry, with a view to selecting the necessary number of officers holding temporary commissions for recommendation for permanent commissions, until such time as the Cadet Colleges begin to turn out entrants; and even after that it is intended to select specially a few officers on the temporary list for permanent commissions annually.

"The organisation of the Royal Air Force on a Peace basis will necessarily take time, and a period of from two to three years is likely to elapse before it reaches a position of stability comparable with that of the Navy and Army before the War. The strength of the armed forces of this country, inclusive of that of the Royal Air Force, depends upon the terms of peace as finally settled and upon the responsibilities thereby imposed on the British Empire.

"Permanent commissions in the first instance are not being granted to certain ground services which are included in the following Departments:—Works Department, Director-General of Supply and Research, Medical Department, Chaplain-General's Department, General Service Pay Office, Director of Communications.

"The total number of permanent commissions cannot be fixed for reasons already given. Consequently, it has been decided to confine the list for the present to those actually serving in the Royal Air Force units. It is intended, however, that such officers of the above departments as are qualified for service in the Royal Air Force units, will, after their period of employment in the department is over, be included in the permanent establishment of the Royal Air Force.

"As far as possible officers have only been granted permanent commissions who are qualified pilots and observers, but a certain number of exceptions have been admitted in the cases of officers who have worked the whole time in the Air Force. In particular, it has been necessary to grant a certain number of permanent commissions to technical officers, who do not possess the flying qualification. As we train our own men up from our own colleges, all will possess this flying qualification, but in order to form the Force now on a sound basis, it was necessary to recognise the just claim of a number of technical officers who do not fly."

In conclusion, Gen. Trenchard said that he thought that in two years those who had left would be sorry they had left, and those who stopped on would be glad they had done so.

Long Trial by R 34

At 9.30 p.m. on June 15 the airship R 34 started from her station at East Fortune on a trip to test the wireless sets. She returned safely at 4 a.m. the next day, and it is understood that the trial was satisfactory, communication having been established with the Azores, a distance of 1,200 miles. In company with the R 29 the airship cruised to North Berwick and back to Edinburgh, then going over the Firth of Forth to May Island. Brig.-Gen. Groves, Deputy Chief of the Air Staff was one of the passengers in the R 34; he had arrived from London by aeroplane, having flown the 363 miles in 2½ hours.

Photographing Air in Motion

FROM Washington comes an interesting item, which says that photographs showing the air in motion across the wings of an aeroplane, have been taken with a cinematograph camera equipped with a device recently invented. The first prints were given to Mr. Crowell, Assistant Secretary of War, just before he sailed from New York for Europe. The photographs were made in a series of experiments with army aeroplanes, and they should prove of considerable value to designers of aircraft.

Dinner in Mid-Air

ON board one of the twin-engined Farman Lorraine "limousines de luxe," M. Maurice Farman, with his family (six persons in all), ascended from Bouque on June 9 at half-past five, and during the trip of 3½ hours, the company enjoyed dinner. The machine was piloted by M. d'Or, and

flying by Orleans and Blois, reached Chambord Castle before turning for home. During the return trip, M. Maurice Farman changed places with the pilot to enable the latter to have his dinner.

And a Wedding in Mid-Air.

To Lieutenant Meade, of Ohio, and Miss Marjorie Dumont, of Indiana, apparently falls the distinction of being the first to be married in mid-air in an aeroplane. The ceremony was performed by Chaplain Rees, in a Handley-Page bomber, some 2,000 ft. up at Houston, Texas. The wedding party on board, including the bride and bridegroom, numbered twelve. According to the local reporter, the exhaust from the two Liberty motors roared forth a new wedding march.

Bolshevists' Bombing Raids

ACCORDING to a message from The Times correspondent at Helsingfors on June 13 aeroplanes belonging to the Bolshevik (Red) Army began bombing raids on the frontier.

Bombing Work in Russia

BRITISH seaplanes on Lake Onega on the morning of June 8 attacked with bombs four Bolshevik craft. Though no direct hit was secured, the seaplanes raked the decks of the enemy craft with machine-gun fire and succeeded in silencing their anti-aircraft guns. The Bolsheviks fled in a zigzag course, and were pursued for a great distance. One seaplane returned to its base, reloaded with bombs, and then rejoined the flight. All our machines returned safely.

AIRISMS

FROM THE FOUR WINDS.

"OVER six million words have been sent from Paris to London by the British delegation to the Peace Conference over the military telegraphs with their headquarters at the Hotel Astoria."—(Telegraphic Agency).

Evidently the Peace troubles are getting on. This little telegram is probably the "foreword" to the Treaty proper, so that we may hope to hear presently that the telegraphing of the treaty text itself has commenced.

As we surmised last week the scheme alleged to emanate from No. 7 Training Squadron R.A.F. to supply pilots, ground staff, machines, etc., for aerial transport in Bedford is nothing more than a Bumbledom mare's nest, and evidently *somebody* has been pulling the leg of the Bedford Town Council. Promptly comes to hand, we are pleased to say, repudiation of there being any truth in the suggestion. Maj. L. F. Wynne Willson, for O.C. No. 7 Training Squadron, writes us upon the subject as follows:—

"With reference to a paragraph which appears on page 781 of your issue of June 12, 1919, regarding an offer made by No. 7 Training Squadron, R.A.F., King's Lynn, to supply pilots, ground staff, machines, etc., for aerial transport in Bedford, I have the authority of the Commanding Officer, No. 7 Training Squadron, to deny completely that any such offer has ever been made by this Squadron. He wishes me to ask you to publish this denial. I need hardly say that such gross irregularity would never be permitted by this Squadron."

BEDFORD papers please copy!

On Thursday next week, June 26, the King will open the Royal Naval, Military and Air Force Tournament at Olympia, when it is only natural to suppose the rush to witness the wonderful programme each day will be a record. Besides the famous British units which will take part, including the R.A.F. and the W.R.A.F.'s, French officers and soldiers will be represented. A display by the R.A.F. is an attractive item in each day's programme, and not the least interesting will be the competitions by women drivers. The latter will drive their cars between posts very much after the fashion of the artillery driving displays. In competition they will

dismantle wheels and refit at express speed, 'showing' what many of them had to do in France when shell fragments or bad roads broke the wheels or other parts. The Air Force, in their display, will demonstrate methods of preparing, dismantling and salving machines and of caring for injured pilots—all according to war conditions. The Women's Corps will also give a physical drill display throughout the run, representatives of the Q.M.A.A.C., W.R.A.F. and W.R.N.S. taking it in turn. Apart from the arena, women of these corps will be at work helping the administration of the Tournament.

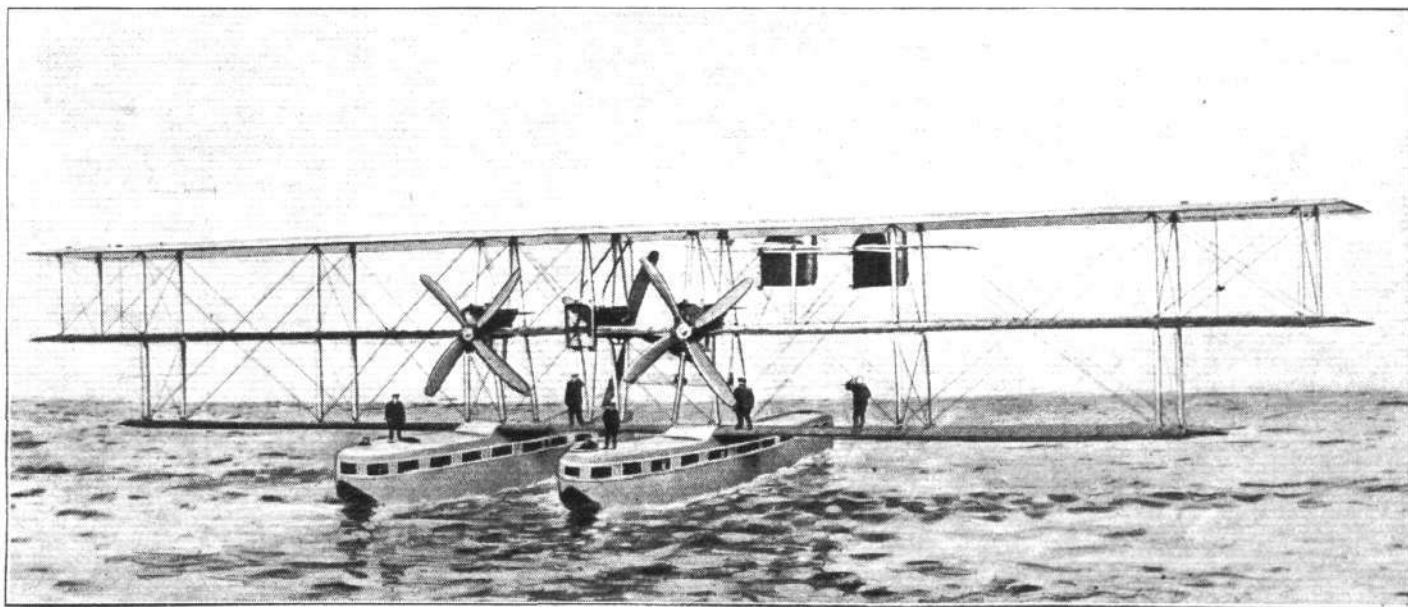
On the day before, June 25, the dress rehearsal takes place, and will be given before wounded men of the three services.

Just in case Southend-on-Sea should forget about the Hun air-raids a war trophy—a Gotha—is now in place on the Western Esplanade.

VERY diverse views exist as to what is the best thing to do with the ships of the German Navy. To give the beastly things back to the Huns is unthinkable. Quite a novel suggestion, which may prove of material advantage to aeronautics, has been put forward in *The Times* by "Ancmos" which, provided the cost of fuel and manning be not too excessive, might be worth taking into consideration. "Ancmos" puts his case as follows:—

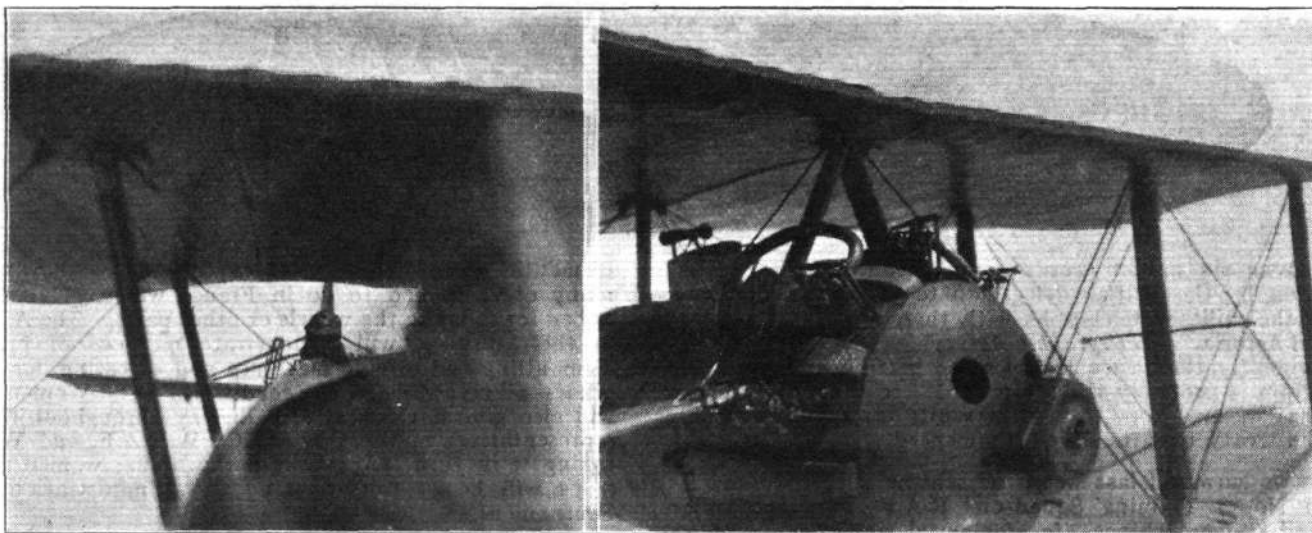
"Scientific interest in the currents of the winds at levels far above the surface of both land and sea has been felt by aerographers and meteorologists for some years, and yet but little data could be gathered at sea by private enterprise. Twelve years ago Messrs. Rotch of Blue Hill and Teisserenc de Bort of Trappes sent out a ship to make soundings of the air between the Azores, Madeira, and South America, and published part of the discoveries. These remain the sole data of available winds at high altitudes over the ocean.

"The recent Transatlantic flight has broadened the demand for information of this nature, and the suggestion has been made by a most distinguished naval authority that certain ships of the German High Seas Fleet might be used to great advantage as bases for the scientific exploration of the upper air over those parts of the ocean which may become usual



AN OCEAN-GOING SEAPLANE OF THE FUTURE.—This picture shows the huge Short Triplane designed for trans-oceanic passenger service, a view of which from a different aspect appeared some weeks ago in "Flight." The machine, as it will be seen, is of the twin-float type, the floats also serving as saloons for the passengers. Each will accommodate 25 passengers, and arrangements are to be made for providing dining and sleeping accommodation on board. Some idea of the size of the machine may be formed from the fact that each float is 50 ft. long, while the span of the machine is 160 ft., and the overall length nearly 100 ft. The power plant will consist of three Rolls-Royce engines (Kondor) of 600 h.p. each, which, it is estimated, will give the machine a speed of over 100 m.p.h. A feature of this machine is that, should the planes be damaged, they can be cut adrift and the journey

be continued on the sea



THE BOULTON AND PAUL "BOURGES."—Two views taken by the designer of the machine, Mr. J. D. North, during a recent flight from Norwich to Hendon. On the left: Looking aft. On the right: Snap of port "Dragonfly" engine

routes for intercontinental aeronautics. In order that the ships might be made as stable as possible, the turrets and other heavy masses of the superstructure should be removed and the ship provided with enlarged sea-anchors."

The suggestion has the further advantage that by this means the whole of civilisation, including ultimately the Huns themselves, would benefit by thus utilising these engines of war.

It certainly does seem as if at least equal facilities for service men and service women might be accorded in regard to the issue of half-fare vouchers for railway travelling. According to a young woman in the uniform of the W.R.A.F.'s, who was fined 40s. at Chatham last week for travelling without paying her fare, these half-fare vouchers were the privilege of the men only, although they earned more money than the women. Presumably, therefore, this was the method the W.R.A.F. adopted of airing the grievance, and at least it is a better excuse than is usually forthcoming for lapses of this nature.

In view of what was said in our editorial comments last week, we welcome the following official notification regarding the Atlantic flight of R. 34, made on Saturday last, June 14, at East Fortune Aerodrome by Capt. Coombes, Intelligence Officer:—

"The R. 34 will probably go on a short flight this evening in order to test the wireless apparatus. Official intimation has been received that the actual flight will not take place before instructions are received from Maj. Muller, in America, that arrangements there are complete. This news is expected daily, and meanwhile any dates are merely guesswork."

A SIGN of the times may be noted in the aerial tour which it is reported started on June 10 at Gothenburg. The Danish millionaire, M. Larsen, under the pilotage of Capt. Battam, the American aviator, thus commenced an aerial tour which when completed, will cover the following route:—Bergen—Christiania—The Skaw—Copenhagen—Stockholm—Hango—Helsingfors—Reval—Stockholm—Gothenburg—Copenhagen.

THAT American marriage in the air, will it be followed by aerial divorces, we wonder? There doesn't seem to be any limit to the gay flippancy of our cousins across the water, and some of those Arizona cases of incompatibility of temperament, where you get your divorce with about as much formality as there is in securing a dog licence, would be suited by this method. Aerial burials Kipling has already touched on in that story of his about the American inventor whose English home is invaded by a couple of German spy gentlemen in the days before the War. You remember the conclusion: how the two dead men are put in their own machine, the power turned full on, and the aeroplane with its grim load sent out to the Channel?

AN English flying officer taken prisoner in Germany was annoyed, on receiving his washing, to find that only eleven socks were returned to him, instead of the dozen. He wrote a diplomatic letter to the camp commander. No reply. A fresh request, to the Colonel in charge of the town. Silence. Respectfully, but firmly, the Britisher wrote to the Minister of War, finally asking King Louis of Bavaria to restore him his sock. We do not know how the Boches took this humour of an isolated and half-starved man, but it is stated that the officer in question has now lost his reason.

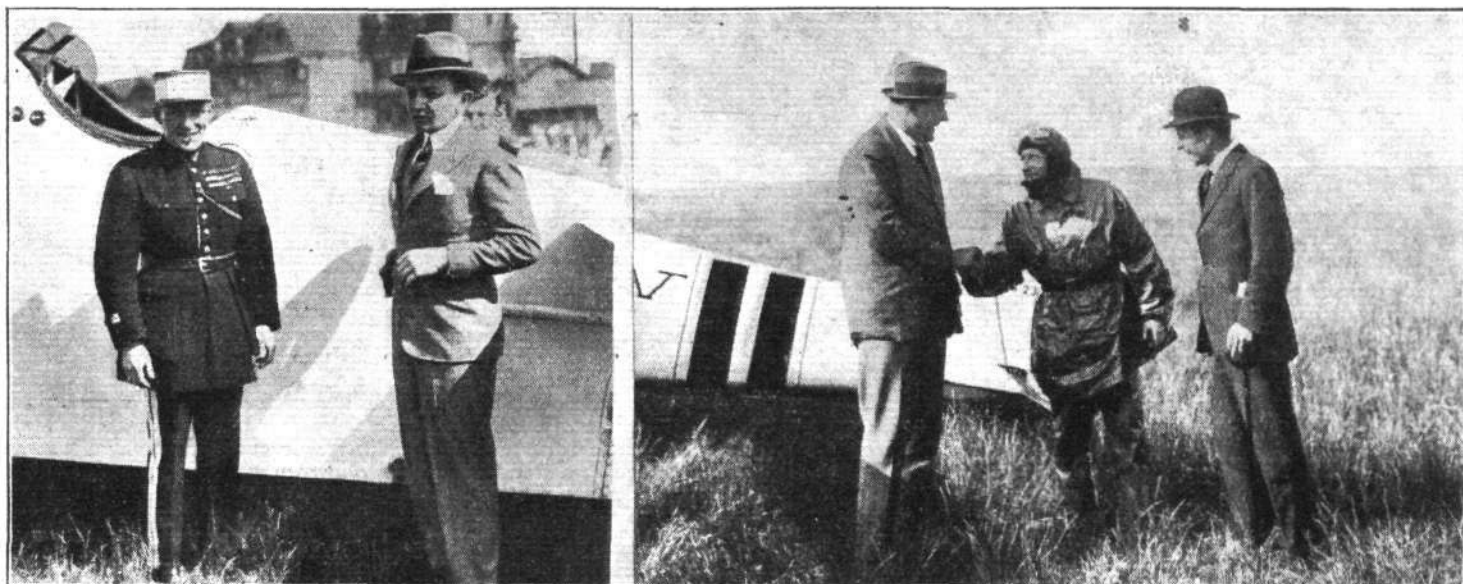


A SOPWITH PASSENGER MACHINE.—One of the Gnu biplanes, with enclosed cabin for the passenger. In the photograph the cabin is shown open

FLYING AT HENDON

SATURDAY last was a rather quiet day at Hendon, as no races had been arranged. However, a great deal of passenger work was done, the Avros and "Kangaroos" being kept very busy all the afternoon. This applies also to Sunday's flying, when the Grahame-White "stable" was kept full up with work. The guinea "flips" are certainly getting very popular, and deservedly so, since for that "fare" quite a reasonably long flight is given. There is just one respect in which, we think, there is room for improvement. At

in the company of Mr. Marechal and Mr. Nestler, having come over from Paris the previous evening by train and boat—and not by air, as doubtless he would have preferred. He was looking exceptionally fit, and his brave display of decorations—four rows, including the Croix de Guerre with no less than 38 palmes—attracted the interest and admiration of those present. It was unfortunate that he had not been expected, or he would certainly have received the warm welcome due to so notable an Allied aviator. He expressed his



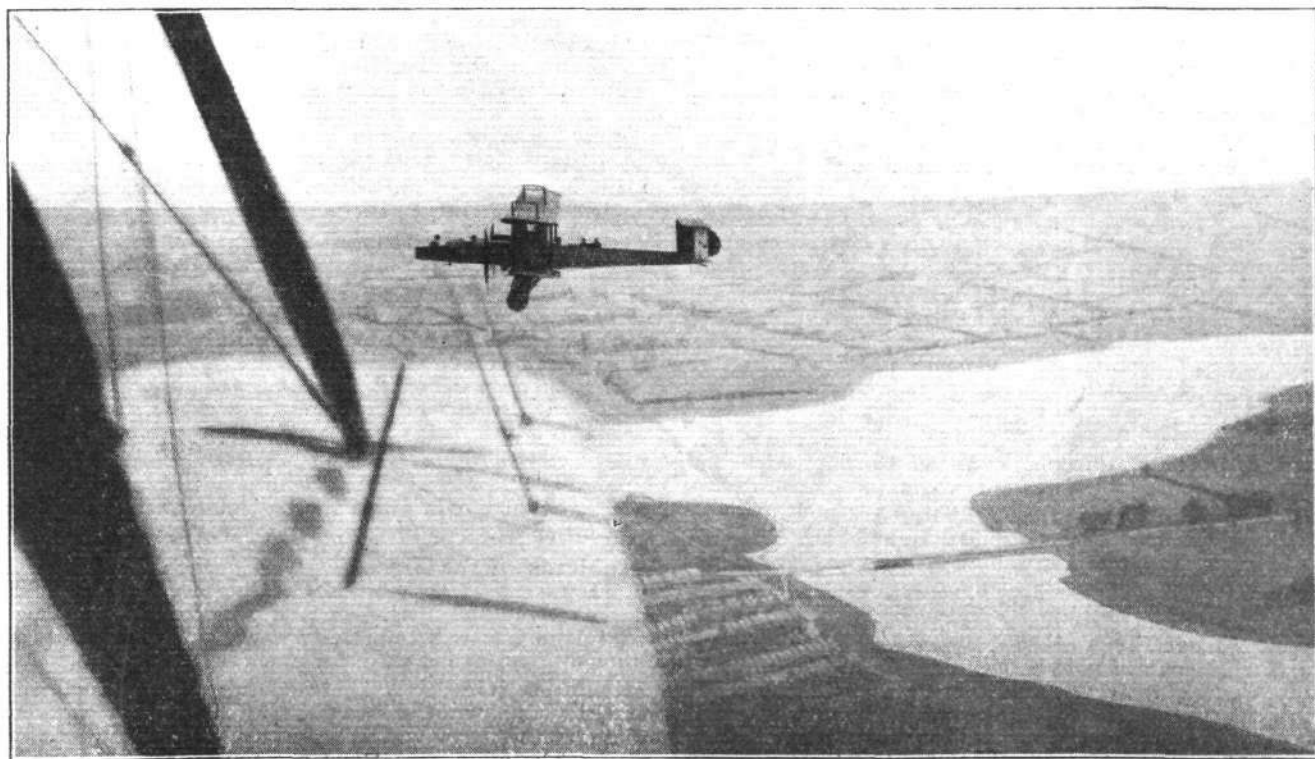
"Flight" Copyright.

Capt. Nungesser, the great French "Ace," pays a "flying" visit to the London Aerodrome, Hendon. On left, with Mr. Nestler, Capt. Nungesser in uniform before donning flying rig. In the right-hand picture the French "Ace" is congratulating Mr. Koolhoven upon the remarkable flying properties of the B.A.T. Bantam, Mr. Douglas Thorburn completing the happy trio

present an extra charge is, we understand, made for the use of a flying cap or helmet. As part of the safeguarding of the passengers this very necessary piece of head-gear might well, we think, be included in the passenger's fee. We have no doubt that when this is pointed out, the Grahame-White Co., Ltd., will speedily set this little matter right.

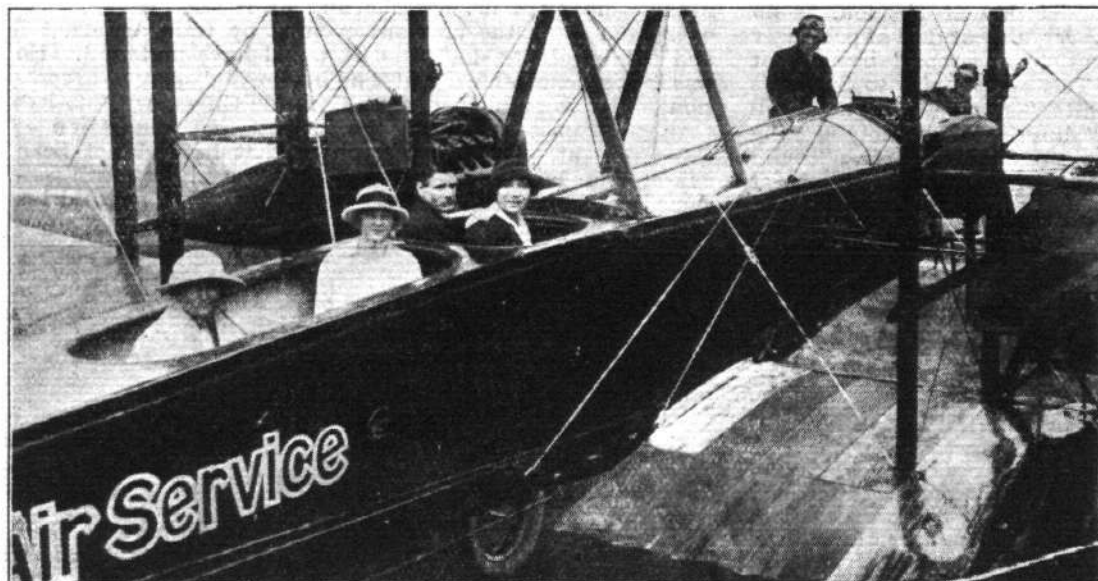
A notable visitor at Hendon on Sunday last was Capt. Nungesser, the French "Ace," who paid his first visit there

pleasure in seeing at last an aerodrome he had known by name for so long, and was interested in the numerous flights made by sundry Avros and a Blackburn "Kangaroo," a type new to his experience. He remarked to a friend that there was no similar public aerodrome in France for exhibition and passenger flights, and it was evident he was impressed with the possibilities of the idea. It would be of great interest if the proprietors of the London Aerodrome could



"Flight" Copyright.

PASSENGER FLYING AT THE LONDON AERODROME, HENDON: A G.-W. "Kangaroo" plane over the Welsh Harp, on Saturday



"Flight" Copyright.
Public Flying at
London Aero-
drome, Hendon:
Passengers
aboard a G.-W.
"Kangaroo"
ready for their
flight

induce Capt. Nungesser and some of his famous confrères, Fonck and Casale, for instance, to come over and give the British public an exhibition of flying. It would undoubtedly be a popular event, and help to foster the Entente Cordiale, which has had during the War a special significance in the Allied Air Services.

When Capt. Nungesser was asked if it was true that he was intending to enter for the big competition organised by the *Echo de Paris* with a certain British machine, he said with a smile that he did not decide these things in a hurry. In reply to the remark that his splendid career throughout the War showed he always acted with caution, he agreed that half of the success of life depended in the reflection before the action. If he selects a British machine for the flight in question, it will be a great compliment to our home industry and design, and he will have the cordial wishes of all good

sportsmen, who appreciate marvellous bravery and exceptional skill in the air.

On Monday afternoon Capt. Nungesser was again at Hendon. Maj. Draper gave an exhibition flight on a small Bat (A.B.C. motor) which can truly be described, even in these days, as thrilling. His evolutions aroused the enthusiasm of the French "ace," who himself took up the same machine and made a fine flight. His stunts were remarkable after he had got the "feel" of the little 'bus, and spectators would hardly have credited that the pilot had never seen the machine before. Some of the stunts were, perhaps, due to the fact that the controls were very different from those to which he had for so many years been accustomed, but he expressed his keen delight on his return, and warmly complimented both Maj. Draper and Mr. F. Koolhoven, the designer of the machine. We hear Capt. Nungesser may be in London again shortly.

RESETTLEMENT

THERE are many officers and men of the R.A.F., who are demobilised or are about to be demobilised.

In order to assist those who are undecided or are seeking advice as to their prospects in civil life, the Editor has arranged for an expert, with wide experience of service, industrial and educational conditions, to give advice to those who may solicit it through the medium of this Journal.

Applications, which must be in writing, should be marked *Resettlement*, and addressed to the Editor, FLIGHT, 36, Great Queen Street, Kingsway, W.C. 2. They will be dealt with in these columns, as far as possible, in rotation.

F.A.H., EX-R.A.F. (FITTER).—You may experience great difficulty in obtaining work as an aero engine fitter in commercial aviation, because comparatively few will be required in the immediate future. You will be best advised to seek employment in the motor trade, in which you say you are experienced. Recently the Eastbourne Aviation Company, Eastbourne, and Messrs. Handley Page, Cricklewood, were seeking fitters through the medium of the situations vacant columns of this Journal. As your service experience is largely

with rotary engines you can try the former company, but it is some weeks since they advertised, and all their vacancies may be filled by now.

E.B.R., EX-FLIGHT CADET.—You should look through the advertisement columns of this journal, and select a few well-known aircraft manufacturers. Write to the general managers, stating that you wish to learn the trade as an apprentice. Give full particulars of your education and training, as well as your service experience. Before completing arrangements you will be well advised to get in touch with the Appointments Department of the Ministry of Labour, to ascertain whether they approve of the particular firm in question.

S.T.S., EX-FLIGHT CADET.—Your query should be addressed to the Secretary, Air Ministry, Strand, W.C. 2. Head your letter "Honorary Commissions, Ex-Flight Cadets," give full particulars of your service, when you were appointed a Cadet, to what extent you had graduated, etc. Your letter will then be dealt with in accordance with the regulations at present in force.

Lightning Bursts Balloon

A MESSAGE from Taranto gives details of an extraordinary accident. It states that lightning struck and exploded an observation balloon accompanying the Dreadnought *Giulio Cesare* while the latter was at target practice outside the harbour. The crew of the balloon are safe, having left the balloon at the first sign of the approaching storm.

To Check Forest Fires

DEFINITE steps are now being taken in the direction of organising patrol, over Canadian forests. A seaplane has arrived in the St. Maurice valley from Halifax, while a second is due to arrive shortly. Arrangements are being made by the St. Maurice Valley Forest Protective Association to provide centres throughout the forest areas controlled by them with constant patrols of aeroplanes so as to signal immediately a forest fire is discovered to wireless stations,

and secure prompt assistance. Active support is being given to this work by the Dominion Government, as it is believed that it will prove the best plan yet adopted for the prevention of forest fires.

Problems of the Future

SPEAKING at the annual meeting of the British Science Guild on June 18, Brig.-Gen. Seely, Under-Secretary for Air, said there was still something wanted to fulfil Lord Northcliffe's dream of delivering newspapers on both sides of the Atlantic within a day. There were problems of directional wireless and wireless telephony. They were working at these, and in a few years they would wonder how it was that the wandering airman could not tell exactly where he was. Another trouble was, in fog, to know which way up one was. One felt no rush of blood when upside down, and the first hint was when one's cigarette hit one's nose.

AIR MINISTRY METHODS

THE following clauses are taken from the Report of the Select Committee on National Expenditure published on June 12. We refer further to these matters on page 792.

The Air Ministry

14. Our Sub-Committee on the Air Ministry have met seven times and examined 10 witnesses.

MOTOR CARS

15. The number of motor cars kept for the use of the Department at the present time is 48—of these 33 are allotted to 33 officials for their own use, and 15 are pooled for the use generally of the staff.

16. A list is attached of the officials at the date of the investigation who have cars allotted to them.

17. Many of the cars are very large and powerfully engined, consuming a quantity of petrol and wearing out many tyres.

18. As it appeared that Mr. Winston Churchill had a car allotted to him, the Sub-Committee inquired if he also had one provided by the War Office. The officer in charge of the motors did not know, but on making inquiry found that a car was provided at the War Office, and that Mr. Churchill had notified a month ago that he did not also require a car at the Air Ministry. This notification does not appear to have reached the officer in charge.

19. Log books recording the journeys of the cars are kept. The Sub-Committee inquired if those were ever examined, and were informed that two examinations of the allotted cars had taken place in July, 1918.

20. The following are the official reports of these examinations:—

Minute 5

"From an examination of the log books of the allotted cars and requisition slips for the use of Pool cars, it is evident that further considerable economies might be effected.

"It is noticed that cars are frequently used for the purpose of conveying officers to and from the various termini, and in some cases are used to fetch the allottees from their residences in the suburbs, and one appears to make frequent visits to the City.

"Cars are also sometimes used for long journeys where the unit visited is at some distance from a railway station, and it seems that the practice adopted by some officers of travelling by train to the nearest station and arranging to be met by a car from the unit might be made universal.

"Several journeys seem to be too short to necessitate the use of a car; for instance, one Crossley touring car has been employed during an entire week on journeys between the War Office, Haymarket, and Hotel Cecil, varied by one trip to Liverpool Street Station, total mileage, 106; petrol consumption, 11½ gallons.

"As regards the cars in the 'Pool':—

"The daily average number of journeys for one month—May 20 to June 14 (Saturdays and Sundays excluded)—is 16. The maximum is 24 on one day, and on four days only has the number of journeys been 20 or over.

"Liberal provision being made for cars being out of action, the number in the 'Pool'—43—seems to be excessive.

"We have examined the log books of 68 cars forming the 'Pool' and allotted cars for the week ended July 27 (seven days). During this week three cars were not used at all. Full details of the journeys made by the other cars are attached. Of these, as many as 25 cars had a total mileage of less than 100 for the week. Please see 10A. This examination fully confirms all I said in Minute No. 5.

"It is necessary to emphasise the fact that most of the cars are obtained at Kennington, and it frequently happens that a car is requisitioned to make such short journeys as to the War Office and other really adjacent places, and has first to make the journey from Kennington."

21. This report was sent to the Air Council, who took no action.

22. One of the officials who has a car allotted to him informed the Sub-Committee that his duties were almost wholly at the Hotel Cecil, varied by occasional visits to the War Office and the Treasury. Asked for what he used the car, he said it fetched him from his house in London in the morning, took him out to lunch, and took him home again in the evening.

23. These cars are garaged at Kennington. The Sub-Committee asked what the cost of maintenance was, and the items for a week in May of this year were handed in. They are as follows:—

ESTIMATE OF WEEKLY EXPENDITURE OF THE LONDON M.T. SECTION, KENNINGTON.

Rents and rates	£
Gas, electricity, and water	45
Officers' salaries	15
Wages—	60
R.A.F.	£195
W.R.A.F.	260
Civilians	780
	—1,235

Running Expenses.

Petrol, oil, grease, etc.	340
Repairs and renewals	750
Miscellaneous	50
Total	£2,495

It will be observed that this expenditure is at the rate of £129,740 a year for touring cars.

24. The Sub-Committee examined Lord Londonderry, the Finance Minister to the Air Council, he having been appointed in January of this year. He stated that in his opinion the cars are too large and use too much petrol and too many tyres, and that now the war is over the old practice whereby Ministers found their own means of locomotion might be reverted to.

25. Your Committee are of opinion that even if it was necessary during the War to provide motor cars, that necessity no longer exists. They consider that the system creates an atmosphere of extravagance which is bad for the staff and the service generally. They recommend that the provision of cars for the use of Ministers, officers, and officials be discontinued.

Destruction of Aeroplanes

26. On November 11, 25,000 aeroplanes were on order. The Air Council met on November 11, 15, and 29, 1918, to consider the action they should take in view of the Armistice.

27. They decided to inform the Ministry of Munitions that they required no more aeroplanes, and the following is an extract from the minutes of the meeting at which they came to this conclusion:—

Action by Air Ministry after November 11, 1918, as regards Reduction of Production of Aircraft and Accessories.

(a) The Director-General of Aircraft Production, a Ministry of Munitions appointment, is a member of the Air Council; it is his duty to take such action as is necessary as regards the work of the Air Group of the Ministry of Munitions to give effect to the wishes of the Air Council.

(b) At a meeting of the Air Council on November 11, 1918, the day of the Armistice, at which the D.G.A.P. was present, it was decided that, in principle, as little equipment as possible would be wanted, and this should be all of the most modern type.

(c) At a meeting of the Air Council on November 15, 1918, at which the D.G.A.P. was present, the Secretary of State stated that the Air Ministry should not take delivery of a single machine which they could get out of. I brought before the Air Council a list of obsolescent machines; of these four types were still in production. It was agreed by the Air Council "that the most rigorous and drastic steps must be taken to shut down further manufacture of these four types. The output which could not be cancelled should be sent to store direct, and should not be made over to the Royal Air Force."

(d) At a meeting of the Air Council on November 29, 1918, the D.G.A.P. stated that his department was arranging for the delivery of the fewest possible aeroplanes.

28. These decisions were, however, not adhered to, and on December 6, 1918, the following letter was written to the Ministry of Munitions:—

Subject:—Acceptance of Further Deliveries of Aircraft.

Sir,—I am commanded by the Air Council to state for the information of the Minister of Munitions that they have given consideration to the question of the acceptance of further deliveries of aircraft and engines.

The Air Council desire to make it clear that under present conditions further deliveries are not, in fact, required by them. They appreciate, however, that labour and other considerations may prevent the Ministry of Munitions from arranging a complete cessation of further deliveries, and for this reason the Air Council are prepared to continue to accept aircraft and engines of which continued production

is required by these considerations. But they desire to be furnished as early as possible with full particulars of the machines and engines which they will be expected to accept, and they desire to be consulted with regard to each specific type of aeroplane for which it may be proposed to place entirely new orders.

I am, Sir, your obedient servant.

29. The Sub-Committee asked what was meant by "labour and other considerations," and were informed that instructions were sent that labour was not to be dispersed until after Christmas, 1918.

Accordingly machines were taken from contractors which were not wanted, and as national factories were also to be kept going, it was necessary to find work for the people there, with the result that machines, taken from contractors to keep the people there employed, were sent to the national factories to be destroyed to keep the people there employed.

30. After Christmas, 1918, other counsels prevailed, and steps were taken to cancel contracts. At the time of the Armistice, aeroplanes, spare parts, etc., were on order to the extent of 150 millions. This was cut down to about 65 millions. The 25,000 aeroplanes on order were reduced to 13,432.

31. The Sub-Committee have visited Henlow, where aeroplanes are being scrapped, and much labour is being spent on dismantling machines, while the product is in many cases of little value. They are of opinion that if the engines and the valuable parts were taken out and preserved and the rest burnt, considerable savings would ensue.

32. Your Committee desire to express their satisfaction with the management of the camp, and the efficiency of the force there. They consider, however, that the construction of the buildings is faulty, the walls being of bricks only 4½ in. in thickness, with the result that the rain drives through. If the camp is to be permanent, the whole of the walls should be cemented on the outside if only in the interests of the health of the occupants.

33. The depot appears to your Committee to have been designed on much too extensive a scale, and only a portion would appear likely to be used in the future.

Estimates

34. Your Committee have ascertained that the estimates for the year 1919-1920 were presented to Parliament by the Air Ministry before the consent of the Treasury had been obtained. This is a matter which calls for severe condemnation.

List of Officials to whom Motor Cars have been Allotted.

*Mr. Winston Churchill	.. S.O.S.	.. Rolls-Royce limousine
*Maj.-Gen. Seely	.. U.S.O.S.	.. Rolls-Royce cabriolet
*Maj.-Gen. Trenchard	.. C.A.S.	.. Rolls-Royce landaulette
*Maj.-Gen. Sykes	..	.. Rolls-Royce cabriolet
*Maj.-Gen. Ellington	..	.. Rolls-Royce car
*Sir A. Duckham	..	.. Crossley landaulette
*Sir J. Hunter	.. A.W. & B.	.. Crossley landaulette
*Marquis of Londonderry	..	.. Crossley landaulette
Rear-Admiral Lambert	.. D.O.P.	.. Rolls-Royce landaulette
Sir A. Robinson	.. Secretary	.. Crossley landaulette
Maj.-Gen. Paine	.. I.G.	.. Rolls-Royce landaulette
S.O.S. Staff	..	.. Crossley landaulette
U.S.O.S. Staff	..	.. Crossley landaulette
Brig.-Gen. Groves	.. D.C.A.S.	.. Crossley car
Brig.-Gen. Maitland	.. S.A.	.. Crossley landaulette
Brig.-Gen. Foll	.. Med. Ad.	.. Crossley car
Brig.-Gen. Steel	.. D.A.D.	.. Crossley landaulette
Gen. Swinton	.. Press Bureau	.. Crossley landaulette
Brig.-Gen. Lambe	.. D. of E.	.. Rolls-Royce cabriolet
Brig.-Gen. Game	.. D.T.O.	.. Crossley car
Brig.-Gen. Brooke-Popham	.. C.T.D.	.. Crossley landaulette
Brig.-Gen. Bagnall-Wilde	.. A.I.D.	.. Crossley car
Maj.-Gen. Ashmore	.. Home Defence	.. Crossley car
Maj.-Gen. Ashmore (Staff)	.. Home Defence	.. Crossley car
Ad. of Works and Buildings	..	.. Ford car
Ad. of Works and Buildings (Staff)	..	.. Ford car
Lt.-Col. Wilson	.. L.O.L.A.	.. Crossley cabriolet
Lt.-Col. Restler	.. C.E.E.	.. Crossley car
French Aviation Com.	..	.. Crossley landaulette
Lt.-Col. Muchie	.. R.A.F. Hospl.	.. Crossley car
I.G. Staff	..	.. Lancia car
London Reception Com.	..	.. Ford car
Med. Squadron	..	.. Crossley landaulette

* Air Council.



Married

Lieut.-Col. R. H. CLARK HALL, D.S.O., R.A.F. (Commander, R.N.), was married on June 11 at All Saints', Lockerbie, to LILLIAS, daughter of Col. and Mrs. R. ELIOTT LOCKHART, of The Hewke, Lockerbie.

Maj. IRVING HENRY BIBBY HARTFORD, A.F.C., R.A.F., son of the late Henry William Hartford, of Christchurch, was married on June 4 at St. Philip and St. James' Church, Oxford, to DOROTHEA RAMSAY HARTFORD, of Rossett, Denbighshire, widow of Capt. H. I. St. J. Hartford, Cheshire Regt.

Capt. A. W. R. MATTHEWS (late R.A.F.), son of Mr. and Mrs. A. Ratcliff Matthews, 188, Elms Road, Clapham Park, S.W., was married on June 17 at Clapham Presbyterian Church, to ANNIE EWAN, daughter of Mr. and Mrs. T. Tindal FITCHIE, 113, Hambalt Road, Clapham Park, S.W.

Sec. Lieut. G. H. MAYHEW, of 10th Street, S.E., Medicine Hat, Alberta, was married at Richmond, Surrey, on June 6, to NAOMI GEORGINA, younger daughter of George CURTIS, of "Claverhouse," Chiddingfold, Surrey.

THOMAS GRAHAM MURRAY, D.F.C., son of the late Capt. J. S. Murray, of The Sandpatch, Wentworth Falls, New South Wales, was married on June 2 at St. Andrew's, Westminster, to MABEL ISABEL, only daughter of GEORGE LAND, Esq., and Mrs. Land, Hastings, New Zealand.

Capt. RANVILLE GEORGE ROLFE-ROGERS, R.A.F., son of Mrs. Rolfe-Rogers, Bedford and Ceylon, was married on May 29 at St. Mary's Cathedral, Glasgow, to KATHERINE ANN DEVEREUX, Acting Administrator, W.R.A.F., eldest daughter of Mr. and Mrs. C. F. MOORE, 6, Wilton Crescent, North Kelvinside, Glasgow.

Items

Would any officer serving with No. 15 Squadron, R.F.C., on July 15, 1917, be so kind as to communicate with R. E. CASALIS DE PURY, 97, Rue de la Pompe, Avenue Victor Hugo, Paris?

Major C. H. DARLEY, R.A.F., had the honour of being received by the King at Buckingham Palace on June 6

Major-General Sir HUGH TRENCHARD, Chief of the Air Staff, had the honour of being received by the King at Buckingham Palace on June 7.

A reader has in his possession a private diary, picked up last October in an empty R.A.F. (Indian Air Force) Camp at Azelôt, near Nancy. It is a Walker loose-leaf diary, and the only trace of ownership is the name G. Little. It is believed there was an officer of this name in 55 Squadron, I.A.F. If the owner will send us his address we will put him in communication with the present holder of his diary.

MENTIONED IN DESPATCHES

The following is the continuation of the list of officers and other ranks of the R.A.F. who have been mentioned in despatches and reports received in the Air Ministry for valuable services rendered during the War. The first part appeared in the last issue of FLIGHT.

Civilian Clergy

The Rev. W. H. Bryant (Mudros).

Warrant Officers, Non-commissioned Officers, and Men.

210534 A.M. 1 A. H. Adams (I. Force, France); 60157 F./Sgt. W. F. Alborn (France); 63101 A.C.1 G. Alexander (France); 7912 L.A.C. J. Alexander (France); 205138 Sgt. T. Ashman (Coast Patrol); 193544 Clk. 1 G. T. Atkinson (I. Force, France); 314092 F./Sgt. D. J. Ayers (H.M.S. *Manxman*); 107299 Pte. 1 L.C. W. Bain (France); 56985 Flt./Clk. A. H. Baker (I. Force, France); 207988 F./Sgt. G. T. Baldwin (France); 218928 A.M.3 L. W. Barber (Coast Patrol); 406873 Sgt. J. Barnes (I. Force, France); 204978 Ch. Mec. W. J. Barnes (Mediterranean); 6682 F./Clk. T. A. Bates (I. Force, France); 46835 Ch. Mec. E. Belcher (I. Force, France); 203376 Ch. Mec. G. Bell (Flanders); 222714 Sgt. J. S. Bell (Flanders); 202221 Sgt. Mec. A. T. Bent (I. Force, France); 6256 S.M. 1 G. C. Billing (Coast Patrol); 115535 Cpl. W. Bingley (France); 15071 A.C.1 N. H. Birkett (France); 211063 Sgt. Mec. N. W. Bootes (Mediterranean); 215343 A./Cpl. R. H. Box (Coast Patrol); 235590 A./Sgt. W. E. Bradford (Aegean); 240649 A.C.2 A. W. Branson (Coast Patrol); 205883 Ch. Mec. F. E. Brisley (Flanders); 200121 Sgt. Mec. M. H. Brown (Mediterranean); 204721 F./Sgt. S. W. Brown (I. Force, France); 225310 L.A.C. T. G. Burrell (Coast Patrol); 20074 Cpl. Clk. B. Cassam (I. Force, France); 256 S.M. 1 G. Chapman (India); 21476 Sgt. W. F. Chord (India); 46359 Cpl. Mec. W. J. Clark (I. Force, France); 211593 Ch. Mec. W. F. Clarke (I. Force, France); 853 Cpl. W. Clarke (France); 16770 Sgt. E. Crooks (France); 4727 Sgt. (A./F./Sgt.) J. Curry (France); 38366 Cpl. E. Davidson (France); 201841 Sgt. Mec. R. S. Denman (Flanders); 130854 C.P.O. (Retd.) A. Dobiear, Roy. Navy (Vendome); 210468 L.A.C. C. T. F. W. Dobson (Scillies); 216094 Sgt. Clk. R. S. Rastty (I. Force, France); 12223 Cpl. Mec. L. Edge (I. Force, France); 39638 Sgt. S. M. Evans (France); 18250 Sgt. Clk. W. C. Exton (I. Force, France); 52232 A.C.1 W. Farmer (France); 215183 A./Sgt. Clk. T. J. Fawdry (Mudros); 208221 Sgt. Mec. J. R. Gardner (Aegean); 213556 Sgt. Mec. W. G. Gardner (I. Force, France); 17130 L.A.C. A. Garfath (France); 18622 A./C. F. J. George (France); 226794 Cpl. Clk. S. J. Goldston (I. Force, France); 223206 F./Sgt. E. Goodman (Vendome, Paris); 204436 Sgt. Clk. 1 V. J. Gosling (I. Force, France); 21956 L.A.C. L. J. Gregson (France); 223963 L.A.C. W. L. G. Guest (Scillies); 231039 Sgt. Mec. J. Hall (Coast Patrol); 984 F./Sgt. W. Hamilton (France); 267814 Clk. (A. Hancock (I. Force, France); 228916 A.C.1 J. Hartley (France); 879 Sgt. G. S. Hartman (France); 37866 Cpl. W. H. Heath (France); 314239 Sgt. A. L. Henderson (Taranto); 215779 Sgt. S. C. Holman (Coast Patrol); 225556 Sgt. Mec. R. J. Hopkinson (I. Force, France); 205113 Sgt. Clk. E. C. Hopper (I. Force, France); 7128 L.A.C. (A./Cpl.) P. G. Hounson (France); 86278 Clk. 1 J. Hunter (I. Force, France); 159656 F./Sgt. C. F. Hurley (Coast Patrol); 202611 Cpl. Mec. H. Jackson (Coast Patrol); 34919 Cpl. T. J. Jackson (I. Force, France); P.O./M15713 Sick Bay Attendant T. P. Jackson (Thasos); 275639 A.M.2 R. Jones (I. Force, France); 60856 L.A.C. W. N. Jones (France); 234810 Sgt. Clk. J. A. C. Kelland (Aegean); 205938 Cpl. G. W. Kellock (Coast Patrol); 22087 L.A.C. A. Kendrick (France); 19497 Flt. Clk. E. W. King (I. Force, France); 10338 Sgt. G. T. King (France); 23173 A.M.1 F. Lake (I. Force, France); 218822 Sgt. Mec. J. W. Lamb (Flanders); 205002 Sgt. Mec. R. G. H. Lamb (Flanders); 47417 L.A.C. U. Lancaster (France); 21251 A.C.1 D. J. Langford (France); 18014 Flt. Clk. W. S. Leigh (I. Force, France); 213497 Sgt. Obs. W. R. Liddiard, D.S.M. (Coast Patrol); 202962 Sgt. W. F. Lindley (Flanders); 210979 Cpl. Clk. W. McGill (Mediterranean); 38128 L.A.C. G. R. MacFarlane (France); 200760 Cpl. D. MacKenzie (Scillies); 217163 Sgt. Clk. C. M. Maffey (I. Force, France); 223837 Sgt. P. Manser; (Coast Patrol); 252 Sgt.-Maj. 1 D. Martin, M.M. (I. Force, France); 314295 Flt. Sgt. J. Martin (H.M.S. *Riviera*); 203507 Sgt.-Maj. E. W. Mayes, D.S.M. (H.M.S. *Riviera*); 213002 Sgt. Mec. E. C. Mead (I. Force, France); 9608 Flt. Sgt. R. Mersy (France); 314303 Sgt. J. E. Milner (Otranto); 313834 Flt. Sgt. W. G. Minter (Flanders); 4263 Flt. Sgt. A. Mockford (France); 18495 L.A.C. R. Moffatt (France); 1103 Flt. Sgt. H. J. Moir (France); 4094 Ch. Mec. G. Morrison (I. Force, France); 16949 Ch. Mec. J. A. Morton (I. Force, France); 8968 A.C.1 H. S. Newell (France); 19190 Sgt. S. Noble (France); 207515 Sgt. Mec. A. C. Oatway (I. Force, France); A./314681 Signalman A. R. Osborne (Horsea, Coast Patrol); 1950 Flt. Sgt. C. Nunn (France); 17416 A.M.1 C. W. Pankhurst (I. Force, France); 250706 Sgt. S. F. Patterson (Coast Patrol); 18780 Sgt. J. Penman (France); 212608 Sgt. Mec. J. C. Pickering (Aegean); 24401 A.C.1 J. Pierson (France); 16426 Sgt. A. W. Pilcher (France); 402956 Cpl. F. S. Plumptre (I. Force, France); 200602 Ch. Mec. A. Poulton (Flanders); 209261 Flt. Sgt. H. W. Powell (Coast Patrol); 202081 Ch. Mec. H. G. Priest (I. Force, France); 37496 Sgt. Clk. H. T. Pywell (I. Force, France); 200730 Sgt. W. H. W. Quantrell (Coast Patrol); 51813 Clk. Clk. J. S. R. D. Rawcliffe (I. Force, France); 17388 Ch. Mec. J. Redpath (I. Force, France); 1105 Sgt. V. H. Ricardo (France); 106796 A.M.1 (A./Cpl.) J. Riley (I. Force, France); 29172 Ch. Mec. A. A. Robinson (I. Force, France); 213628 Flt. Sgt. C. T. Rogers (Vendome, Paris); 2658 Sgt. Clk. E. Roughton (I. Force, France); 19073 F./Sgt. N. W. Russell (France); 118235 Cpl. Mec. T. Ryan (I. Force, France); 314875 Sgt. O. E. Sewell (Malta); 313898 Sgt. Clk. A. G. Sheppard (Flanders); 213787 Cpl. Clk. W. C. Shilling (Mediterranean); 17060 Sgt. (A./Flt. Sgt.) A. Slater (France); 202345 Sgt. Clk. H. A. Smale (I. Force, France); 3825 Ch. Mec. A. Smallman (I. Force, France); F./Sgt. D. M. Smith (France); 22846 L.A.C. L. T. Smith (France); 23875 Sgt. (A./Flt. Sgt.) A. Smuth (France); 1254 Ch. Mas. Mec. C. H. Spong (I. Force, France); 203118 Mas. Mec. T. Stainsfield (Mediterranean); 21435 L.A.C. (A./Cpl.) H. W. Sutton (France); 220270 Sgt. L. A. Sweny (Coast Patrol); 60442 A.M.1 F. W. Taylor (I. Force, France); 239217 A.C.1 J. G. Taylor (Aegean); 207871 Cpl. Mec. S. Thomas (Mediterranean); 67962 Cpl. Mec. F. Thompson (I. Force, France); 763320 C.S.M. H. L. Thompson (Can. Forestry Corps, France); 44624 A.M.1 G. H. W. Thorpe (I. Force, France); 216825 A.C.1 H. G. Tilby (Flanders); 24568 F./Sgt. W. A. Tracey (France); 15963 Sgt. W. R. Trelease (France); 81876 Pte. 1 W. R. Tunnicliffe (I. Force, France); 208208 F./Sgt. A. Turner (France); 206798 Sgt. H. H. Tutting (Coast Patrol); A314762 Sgt. E. F. Watson (Malta); 200340 F./Sgt. A. Wheatley (Coast Patrol); 9401 S./M. G. G. R. White (France); 35191 Cpl. H. White (India); 8332 S.M.1 J. White (France); 17207 F./Sgt. A. F. Williams (France); 68012 L.A.C. P. E. Williams (France); 242189 L.A.C. C. H. Wilson (Coast Patrol); 6659 Cpl. Mec. R. S. Windsor (Flanders); 27632 L.A.C. H. Wright (France); 29170 Cpl. W. M. Wright (France); 22916 L.A.C. J. T. Wright (France).

The following names were included in the list of names brought to the notice of the Secretary of State for War by Lieut.-Genl. Sir G. F. Milne, K.C.B., K.C.M.G., D.S.O., Commanding-in-Chief, British Salonica Force, for distinguished and gallant services during the period from Oct. 1, 1918, to March 1, 1919. The despatch was dated March 9, 1919, and was published in a supplement to the *London Gazette* on June 5 —

Royal Air Force

Bates, Capt. (A./Maj.) F. A., M.C. (Denbigh Yeo., T.F.); Fyfe, Lieut. (A./Capt.) R. G.; Goodacre, Lieut. F. L.; Hirtzel, Maj. C. H. A.; McBain, Capt. (A./Maj.) W. R. B., M.C. (R.F.A., T.F.); Todd, Lieut.-Col. G. E. (Maj., Welsh R.); Williams, Capt. F. G. M.; Wise, Capt. (A./Maj.) C. W., M.C. (R.A.S.C., S.R.).

Airey, 5755 Chief Mech. J. W.; Aston, 17433 Chief Mech. E. C.; Blatchford 3279 Sgt. Mech. W. J.; Chesmore 10659 Sgt. Mech. W.; Day, 2075 Sgt. Mech. J. G.; Dingle, 1751 Sgt. Mech. A.; Dunn, 3917 Cpl. Mech. W. C.; Evans, 8146 Flt. Clk. E. A. A.; Fears, 7677 S.M. L. R.; Fryer, 13181 1st A.M. F. A.; Green, 12575 Sgt. Mech. (A./Chief Mech.) H. E.; Hicks, 21092 Sgt. Clk. S. V.; Johnston, 93769 Sgt. Mech. J.; March, 36440 1st Cl. Clk. (A./Cpl. Clk.) A.; Moss, 42457 Flt. Clk. H.; Partridge, 36612 Sgt. Mech. J. H.; Pays, 18304 Sgt. Clk. J. E.; Pottier, 3651 Sgt. Mech. A. H.; Rook, 8872 Chief Mech. V. P. C.; Swain, 19106 1st A.M. F. C. Thornley, 22111 Sgt. Mech. A.; Wicks, 6470 Sgt. Clk. W. A.

The following names were included in the list of names brought to the notice of the Secretary of State for War by Genl. F. R., Earl of Cavan, K.P., K.C.B., M.V.O., Commander-in-Chief of the British Forces in Italy, for distinguished and gallant services and devotion to duty during the period from Sept. 15, 1918, to December 31, 1918. The despatch was dated January 18, 1919, and was published in a supplement to the *London Gazette* on June 5 —

Royal Air Force

Baldwin, Sec. Lieut. H.; Ellis, Sec. Lieut. F. M. M.; Evans, Lieut. A. J.; Geddes, Sec. Lieut. J. L.; Goode, Sec. Lieut. (A./Capt.) H. K., D.S.O., D.F.C.; Joubert de la Ferte, Lieut.-Col. (A./Col.) P. B., C.M.G., D.S.O., Comd. 14th Wing R.A.F. (Maj. and Lt. Lieut.-Col., R.A.); McLaren, Lieut. A. L.; Mills, Sec. Lieut. (A./Lieut.) S. E.; Mortlock, Sec. Lieut. and Hon. Lieut. A. G.; Winby, Sec. Lieut. and Hon. Lieut. F. C.

Atkinson, 24961 Cpl. H.; Heslop, 50635 Sgt. J.; Hicks 4991 Cpl. A. E.; McGarry, 65830 S.M. A.; McLaren, 24887 1st Aircraftman R.

The following were included in the list of names brought to the notice of the Secretary of State for War by Genl. Sir E. H. Allenby, G.C.B., G.C.M.G., Commander-in-Chief Egyptian Expeditionary Force, of those whom he considers worthy of mention for their services during the period from Sept. 19, 1918, to Jan. 31, 1919. The despatch was dated March 5, 1919, and was published in a supplement to the *London Gazette* on June 5 —

Royal Air Force

Anderson, Capt. (A./Maj.) A. J. G.; Anstey, Maj. C. W.; Archer, Maj. J. O.; Atkins, Capt. and Hon. Maj. W. R. G.; Atkinson, Lieut. J. E.; Bailey, Lieut. L. C.; Baker, Capt. A. H. S.; Baker, Lieut. (A./Capt.) S.; Barbour, Lieut. R. S.; Beaufort, Maj. V. A., M.C.; Blachford, Sec. Lieut. and Hon. Lieut. H. C.; Blunt, Lieut. C. F.; Borton, Lieut.-Col. (A./Brig.-Gen.) A. E., D.S.O., A.F.C.; Boddie, Capt. R. C.; Botham, Lieut. E. L.; Bovill, Lieut.-Col. C.; Bowker, Lieut. J. S.; Brock, Lieut.-Col. H. L. M., D.S.O.; Brown, Capt. J., M.C.; Brown, Lieut. W. C.; Burchall, Lieut.-Col. H., D.S.O.; Burnett, Lieut.-Col. C. S., D.S.O.; Chambre, Capt. J. M. D.; Cogan, Sec. Lieut. G. S.; Colbeck, Capt. P.; Cooper, Capt. J. A.; Cotton, Rev. G. V., C. to F., 4th Class (R.A., Chap. Dept.); Cox, Lieut. (A./Capt.) D. F.; Creswell, Lieut. (A./Capt.) K. A. C., M.B.E.; Crothers, Capt. W. G. M.; Dakin, Sec. Lieut. C. F.; Davis, Sec. Lieut. C. T.; Divers, Lieut. R. J. Dracopoli, Capt. I. N.; Drummond, Capt. (A./Maj.) R. M., D.S.O., M.C.; Egerton, Sec. Lieut. W. C.; Edwards-Evans, Capt. J.; Eggar, Lieut. (A./Capt.) A.; Eiloart, Lieut. G. M.; Essex, Lieut. A. T.; Fawdry, Capt. T.; Felstead, Sec. Lieut. G. D.C.M.; Fidler, Sec. Lieut. C. A. C., D.C.M., C.M.G.; Fleming, Lieut. D. J.; Fraser, Lieut.-Col. C., O.B.E., M.C.; Gething, Lieut. (T./Capt.) P. J., M.C.; Gibson, Lieut. (T./Capt.) H. J.; Goldsmith, Lieut.-Col. N., O.B.E.; Gower, Lieut. W. E., M.C.; Grant, Lieut. and Hon. Capt. E. H.; Hall, Maj. (A./Lieut.-Col.) R., M.B.E.; Hallett, Lieut. C.M.; Heath, Lieut. B.; Helbert, Lieut. L. A. C.; Herbert, Col. (A./Brig.-Genl.) P. L. W.; Hibberd, Sec. Lieut. R. J.; Ivens, Lieut. (A./Capt.) T. S.; Jelcoate, Capt. F.; Johnston, Lieut. C. F. R.; Kearsley, Maj. (A./Lieut.-Col.) A. H. C., D.S.O.; Keegan, Capt. (A./Maj.) M. M.M.; Ley, Lieut. R. H.; Lindup, Hon. Lieut. (A./Capt.) P. L.; Lockyer, Lieut. (A./Capt.) C. E. W.; Long, Capt. (A./Maj.) S. H., D.S.O., M.C.; Macintosh, Lieut. G. C.; Martin, Sec. Lieut. and Hon. Lieut. L. G.; Milnes, Lieut. P. D. S.; Morrogh, Lieut. R.; Mott, Capt. B.; Mudge, Lieut. L. A.; Oliver, Lieut. A. G.; Osborn, Capt. T. D. H.; Page, Lieut. (A./Capt.) J.; Palmer, Lieut. and Hon. Capt. S. J.; Peck, Capt. (A./Maj.) A. H., D.S.O., M.C.; Powell, Maj. (A./Lieut.-Col.) E. W.; Primrose, Lieut.-Col. W. H., D.F.C.; Rowe, Lieut. and Hon. Maj. C. W.; Russell, Lieut.-Col. R. E. M., D.S.O.; Salmond, Maj.-Genl. W. G. H., C.B., D.S.O.; Saxty, Capt. A. G.; Sclanders, Capt. K. G., M.C.; Maj. C. W.; Russell, Lieut.-Col. R. E. M., D.S.O.; Salmond, Maj.-Genl. Shaw, Lieut. W. L.; Sutherland, Lieut. (A./Capt.) W.; Tedder, Maj. (A./Lieut.-Col.) A. W.; Tedman, Capt. F.; Thomson, Lieut. (A./Capt.) D. N., M.C.; Tuttle, Ormr. and Capt. F., D.C.M. (R. Berks R.); Wakefield, Maj. H. C.; Wales, Lieut. and Hon. Capt. G. N.; Walsley, Sec. Lieut. and Hon. Lieut. N. W., M.C.; Watson, Lieut. R.; Waugh, Lieut. A. H.; Webb, Lieut. and Hon. Maj. W. A.; Wells, Lieut. P. G.; Whilton, Sec. Lieut. F., D.C.M.; Williams, Capt. (A./Maj.) F. R.; Wills, Sec. Lieut. R. D.; Woffenden, Sec. Lieut. (A./Lieut.) H.; Wood, Lieut. J.

Ambrose, 403415 Sgt. Clk. S. E.; Austing, 68010 Cpl. Clk. (A./S. Sgt.) J. H.; Banks, 27360 1st A.M. H. G.; Barber, 107782 Ldg. Aircraftman A.; Bartlett, 403800 Sgt. Mech. F. A.; Beaumont, 25049 Chief Mech. F.; Berry, 31097 1st A.M. T.; Bicknell, 67455 1st A.M. A. F.; Boxall, 28790 1st A.M. F. C.; Brain, 148893 1st A.M. J. H. A.; Brookes, 4326 Cpl. Mech. F.; Brown, 33294 Sgt. Mech. L.; Brown, 29089 Chief Mech. W. A.; Brownstone, 7135 Cpl. Mech. N. H.; Burrell, 9494 Sgt. Clk. C. W.; Cairnes, 404019 Cpl. Mech. J.; Candlish, 403924 Cpl. Mech. J.; Clarke, 27418 Cpl. Mech. W. H.; Coleman, 8086 1st A.M. C. H.; Collins, 310530 3rd A.M. A.; Couch, 407186 Ldg. Aircraftman H. W.; Crabtree, 12215 1st A.M. J.; Davies, 78263 Cpl. Mech. F. W.; Dawson, 18034 Cpl. Clk. R. W.; De Garis, 135715 1st Aircraftman J. A.; Edwards, 1168 Chief Mech. H. O.; Ellison, 107935 Cpl. Clk. C.; Everest, 130473 Ldg. Aircraftman W. J.; Fernee, 11258 1st A.M. H. S.; Fernee 5507 Chief Mech. W. A.; Flanagan, 78943 S.M. J. P.; Forder, 39122 Sgt. Mech. R. W.; Fouracre, 403599 Chief Mech. S.; Gambrell, 603893 1st A.M. A. T.; Guinea, 5990 Chief Master Mech. G. R.; Hack, 26802 Sgt. Mech. J.; Hammond, 21924 Ldg. Aircraftman F. H.; Hawkyard, 61623 Cpl. Mech. G.; Hemmings, 3724 Chief Mech. H. A.; Hewitt, 2931 Chief Mech. E.; Hewlett 28063 1st A.M. T. H.; Hicks, 19331 Sgt. Clk. W. E.; Holbrook, 51041 Cpl. Clk. S. C.; Holding, 2371 Chief Mech. W. C.; Holiday, 38555 Cpl. J. F.; Holt, 403822 Sgt. Mech. B.; Howell, 404054 Sgt. Clk. E. C.; Hulet, 11577 1st A.M. A.; Jackson, 40258 Chief Mech. F. W.; Jones, 37413 1st A.M. W. E.; Jenkinson, 403605 Sgt. Clk. H. A.; Johnstone, 50463 1st A.M. E. C. H.; Judd, 28131 Cpl. Mech. F. W.; Knight, 403568 Cpl. Mech. (A./Sgt. Mech.) A.; Lamb, 403502 Chief Mech. B.; Large, 12128 Chief Mech. J. W.; Lee, 403615 Sgt. F.; Lumsden, 403884 Cpl. Mech. J.; Lyndon, 301121 Sgt. J.; Macfarlane, 85474 Cpl. D.; Margetts, 409128 Sgt. Mech. R. C.; Matthews, 403993 1st A.M. E. T.; Mathis, 35702 Sgt. Mech. W. G.; Maud, 5648 Chief Mech. J. W.; Mayor, 23677 Cpl. Clk. T.; McBride, 403677 1st A.M. S.; Meayers, 49022 Cpl. Mech. W. E.; Mendoza, 33553 Flt. Clk. W. Menner, 4899 Chief Mech. J. G.; Milne, 16816 1st A.M. B.

Moorhouse, 33300 Sgt. Mech. W. C.; Morgan, 10505 Chief Mech. A.; Morris, 2712 Sgt. Clk. A. R.; Moses, 75816 Cpl. Clk. J. G.; Nicholl, 18528 1st A.M. H. F.; Nicholls, 103710 Cpl. Clk. J. A.; Nield, 22607 1st A.M. J. R. (died); Norton, 403594 Chief Master Mech. F.; Oliver, 9004 1st A.M. A.; Owen, 6551 Chief Mech. J.; Papworth, 39655 Cpl. Mech. G.; Parkes, 63458 1st A.M. H. L.; Parsons, 23414 Sgt. Clk. H.; Paton, 33674 Chief Mech. D.; Payton, 405632 Cpl. Clk. (A./Sgt. Clk.) E. B.; Pearce, 49736 Cpl. Mech. T. L.; Perryman, 8895 Sgt. Mech. E.; Phares, 127212 2nd A.M. F. W.; Prentice, 107074 2nd A.M. A. G.; Prescott, 33967 Chief Mech. T.; Prime, 41354 Cpl. Mech. H.; Pritchard, 403420 Cpl. P.; Rapkin, 68588 Ldg. Aircraftman (A./Cpl.) E. C.; Reed, 37666 Cpl. Clk. W. H.; Richard, 18539 Flt. Clk. J.; Rowden, 403808 S.M. F.; Russell, 133747 1st Aircraftman F. L.; Sankey, 36862 Sgt. Mech. J. T.; Sant, 32237 Chief Mech. F. W.; Scott,

143329 Sgt. Clk. R.; Selby, 107124 Ldg. Aircraftman L. R.; Shelley, 108970 Sgt. Clk. F.; Shutter, 6654 Sgt. Mech. E. R.; Simmons, 31593 Sgt. Mech. A. R.; Simpson, 407454 Flt. Clk. R. E.; Sparkes, 68505 1st Aircraftman E. G. G.; Stanborough, 32904 Cpl. G.; Stanbridge, 10400 Flt. Sgt. R. R.; Stickley, 3494 Sgt. Mech. R. E.; Swatton, 51544 1st A.M. F. W.; Teitjen, 50879 Sgt. Mech. A. V.; Thorp, 27170 Pte. G. F., Norf. Yeo. (T.F.), att'd. R.A.F.; Tyler, 5002 Sgt. Mech. A.; Unwin, 19211 Ldg. Aircraftman J. M.; Varney, 14785 1st A.M. G. E.; White, 404056 Cpl. Clk. (A./Sgt. Clk.) C. G.; White, 75282 Cpl. Clk. P.; Wicks, 103714 Cpl. Mech. E. W. E.; Wilkins, 7830 Sgt. Mech. (A./Chief Mech.) T. P.; Wilson, 37177 Sgt. J.; Wilson, 405325 Cpl. Mech. J.; Womersley, 30283 Chief Mech. G. H.; Wood, 32780 Sgt. Mech. G.; Woodcock, 32578 Sgt. Clk. T.; Woods, 23382 Chief Mech. G. R.

THE ROYAL AIR FORCE

London Gazette, June 6

The following temporary appointments are made:—
Group Commander (graded as Col., Staff).—Lieut.-Col. P. B. Joubert de la Ferte, C.M.G., D.S.O.; June 3, vice Lieut.-Col. W. R. Freeman, D.S.O., M.C.

Colonel (Staff).—Col. B. C. H. Drew, C.M.G., C.B.E.; June 8.
Staff Officers, 2nd Class (P.).—Maj. J. S. T. Bradley, from Staff Officer, 1st Class; May 31, vice Lieut. H. J. G. Newman, M.B.E. (substituted for notification in *Gazette* May 27).

Staff Officers, 2nd Class (graded for pay at Air Ministry rates).—Maj. G. R. Moser; Feb. 14 to March 4. Capt. (actg. Maj.) W. J. C. Kendall; March 5, and to retain actg. rank of Maj. till April 30.

Staff Officers, 3rd Class (graded for pay at Air Ministry rates) (P.).—Capt. N. Robertson; Feb. 19. Sec. Lieut. (actg. Lieut.) R. Wight; Feb. 14, and to be actg. Capt. till April 30. Lieut. J. A. W. Bourne; Feb. 18, and to be actg. Capt. until April 30 (substituted for notification concerning the above officers which appeared in *Gazette* April 8); Lieut. (actg. Capt.) H. E. Burrell; March 24, and to retain actg. rank until April 30.

Flying Branch

Capt. C. H. Darley, D.S.C., D.F.C., ceased to be graded for purposes of pay and allowances of Maj. (A.); May 19.

Capt. C. W. C. Browne to be Capt. (A. and S.), from (S.O.); May 31.
The following Lieuts. ceased to be graded for purposes of pay and allowances of Capt. (A.):—H. M. Coombs, D.F.C., G.S. White; May 19.

Lieut. H. C. Beeston to be Lieut. (A. and S.), from (O.); April 20, 1918 (substituted for notification in *Gazette* May 24, 1918).

Flt. Cdt. 92559 L. Bacon is granted a temp. commn. as Sec. Lieut. (A.); Oct. 8, 1918.

P.F.O. J. M. Gray (late R.N.A.S.) is granted a temp. commn. as Sec. Lieut. (O.); Nov. 7, 1918.

The following relinquish their commns. on ceasing to be employed:—Lieut. R. W. Jackson (Lieut., Cent. Ont. R.); Jan. 2. Sec. Lieut. (Hon. Lieut.) T. J. L. Ryan (Lieut., Cent. Ont. R.); March 10. Sec. Lieut. (Hon. Lieut.) I. R. B. Francis (Lieut., Can. M.G.C.), Sec. Lieut. (Hon. Lieut.) J. F. A. H. Lindsay, D.C.M., M.M. (Lieut., Sask. R.); Sec. Lieut. (Hon. Capt.) A. C. Rees; March 28 (substituted for the notification in the *Gazette* of March 4. Sec. Lieut. (Hon. Lieut.) F. Fletcher (Lieut., R.A.); March 29. Sec. Lieut. (Hon. Lieut.) W. W. Halsall (Lieut., E. Kent R.); April 10. Lieut. (actg. Capt.) H. C. Sootheran (Westn. Ont. R.); April 13. Capt. G. L. Lewis, A.F.C. (Lieut., R.N.); April 21. Lieut. F. J. Simpson (Lieut., Brit. Columbia R.); April 24. Lieut. C. D. Palmer (Lieut., Argyll and Sutherland Highrs.); April 30. Lieut. G. G. Bell (Capt., E. Ont. R.); May 6. Sec. Lieut. M. G. Penny (Lieut., R.A.); May 20. Capt. C. E. Barrington, M.C. (Lieut., R.A.); Lieut. A. G. Foster-Sutton (Lieut., E. Kent R.); May 22. Sec. Lieut. (Hon. Lieut.) A. E. Haynes, M.C. (Lieut., R.A.); May 23. Lieut. T. J. Denton (Lieut., Canterbury Mtd. Rif., N.Z.); May 27. Sec. Lieut. D. Macpherson; May 31.

Then follow the names of 148 officers who are transfd. to the Unemployed List under various dates. Owing to great pressure on our space it is impossible to reprint this portion of the List.—En.)

The following relinquish their commns. on account of ill-health, and are permitted to retain their rank:—Maj. E. Dalziel; May 24. Capt. J. R. S. Delvin, D.S.C. (contracted on active service); May 16. Capt. A. T. Hope; May 22. Lieut. J. A. Baker (contracted on active service); May 17. Lieut. C. H. P. Hughes, Lieut. C. G. Tysoe (contracted on active service); May 26. Lieut. W. J. T. Oliver; June 7. Sec. Lieut. A. M. Butler (caused by wounds; April 14. Sec. Lieut. G. V. Straker; May 8. Sec. Lieut. S. H. Whipple (contracted on active service); May 22. Sec. Lieut. H. C. Allen (contracted on active service); Sec. Lieut. J. Cornyn (contracted on active service); May 27.

The following relinquish their commns. on account of ill-health:—Lieut. F. C. J. Whigham (Can. Local Forces); May 24. Sec. Lieut. M. C. Burt; May 26.

Maj. J. D. Maude is removed the services, the King having no further occasion for his services as an officer; March 8.

The notification in the *Gazette* of April 1 concerning Sec. Lieut. C. F. Holford is cancelled.

The notification in the *Gazette* of Feb. 14 concerning Lieut. C. H. Dunster is cancelled.

The notification in the *Gazette* of Feb. 28 concerning Lieut. R. Main is cancelled.

The notification in the *Gazette* of April 29 concerning Lieut. (actg. Capt.) O. C. Bridgeman, M.C., is cancelled (notification in *Gazette* of April 18 to stand).

The notification in the *Gazette* of May 23 concerning Lieut. R. H. Johnson is cancelled.

The notification in the *Gazette* of May 27 concerning the undermentioned officers are cancelled:—Capt. (Hon. Maj.) F. B. Binney, Lieut. T. A. Byers.

Administrative Branch

Lieut. (Hon. Capt.) (actg. Capt.) A. M. Watson is graded for purposes of pay and allowances as Staff Officer, 3rd Class (P.), whilst employed as Camp Commandant for the period April 1 to April 30.

Lieut. (Hon. Capt.) A. M. Watson is graded for purposes of pay and allowances as Staff Officer, 3rd Class (P.), whilst employed as Camp Comdt.; May 1.

Majs. to be graded for purposes of pay and allowances as Lieut.-Cols., from May 1 to May 7:—J. B. Batten, D.S.O., R. M. R. Lamb, D.S.O.

S. Snow, M.C. (Temp. Capt. and Qrmr., Gen. List), is granted a temp. commn. as Capt.; July 1, 1918, seniority April 1, 1918.

Lieut. J. B. Pirie to be actg. Capt. whilst employed as Capt., from Dec. 24, 1918, to April 30 (substituted for the notification in *Gazette* Feb. 21).

Lieuts. (A.) to be Lieuts.:—G. M. Metcalfe; May 21. B. S. Johnston May 22.

Lieut. E. C. Richards to be Lieut., from (O.); April 17 (substituted for the notification in *Gazette* May 13).

Sec. Lieut. G. Thomson to be Lieut.; Dec. 27, 1918.

J. G. N. Clift (Lieut., R.E.) is granted a temp. commn. as Lieut.; April 1 (substituted for the notification in *Gazette* May 23).

Sec. Lieut. W. E. Tunks to be Sec. Lieut. (from A. and S.); May 24.

Sec. Lieut. C. R. French to be Sec. Lieut. (from O.); May 21.

The following are granted temp. commns. as Sec. Lieuts.:—W. J. Begley, H. Cartwright, V. B. Randford, H. A. Williams; May 30.

The following relinquish their commns. on ceasing to be employed:—Lieut. (actg. Capt.) H. Richardson (Lieut., Norf. R.); April 9. Lieut. D. N. Stewart-Savile, M.C. (Lieut., 12th Prince of Wales's R. Lrs.); May 3. Lieut. V. C. Roberts (Lieut., E. Yorks. R.); May 6.

(Then follow the names of 20 officers who are transfd. to the Unemployed List under various dates.)

Lieut. J. W. Holdsworth is granted the hon. rank of Capt.; May 9.

Lieut. J. W. Holdsworth relinquishes his commn. on account of ill-health, and is permitted to retain the rank of Capt.; May 14 (substituted for notification in *Gazette* of May 23).

Lieut. (actg. Capt.) E. Gibbons relinquishes his commn. on account of ill-health, and is permitted to retain the rank of Capt.; May 27.

The following Lieuts. relinquish their commns. on account of ill-health, and are permitted to retain their rank:—K. A. Creery (contracted on active service); May 9. L. H. Wrightmeyer; May 22. A. L. Freeman; May 27.

Lieut. (Hon. Capt.) A. P. Lunam, M.C., relinquishes his commn. on account of ill-health; May 23.

Sec. Lieut. J. T. F. Neary relinquishes his commn. on account of ill-health, and is permitted to retain his rank; May 24.

Sec. Lieut. (Hon. Lieut.) A. H. Searle resigns his commn.; May 28 (substituted for notification in *Gazette* of Dec. 13, 1918).

The rank of Lieut. E. C. Chapman is as now described, and not as stated in *Gazette* of Feb. 25.

Notification in *Gazette* of Dec. 20, 1918, page 14959, concerning F. W. Crawford, is cancelled (notification in *Gazette* of Nov. 12, 1918, to stand).

Technical Branch

Lieut.-Col. T. E. St. C. Daniell to be Lieut.-Col. from Depy. Dir.; April 1, and to relinquish the actg. rank of Col.

Capt. H. K. Kennedy-Skipton to be Capt., Grade (A), from Grade (B); April 7.

Lieut. N. Penty to be actg. Capt. whilst employed as Capt., Grade (B) from Oct. 15, 1918, to April 30.

Lieut. G. F. Drudge ceased to be graded for purposes of pay and allowances as Capt., Grade (B); May 19.

Lieut. W. V. Hunt to be Lieut., Grade (B), (from Ad.); Oct. 1, 1918.

Sec. Lieut. H. C. Hull to be Lieut., without pay and allowances of that rank; Nov. 11, 1918.

Sec. Lieut. R. J. Costigan (late Gen. List, R.F.C., on prob.) is confirmed in rank as Sec. Lieut., Grade (A); May 6, 1918.

The following relinquish their commns. on ceasing to be employed:—Capt. D. H. Saunders-Davies (Lieut., War. R.); May 7. Lieut. J. H. Turner (Capt., 2nd Dgn. Gds.); June 7. Temp. Hon. Capt. F. J. Toulmin; June 7.

(Then follow the names of 28 officers who are transfd. to the Unemployed List under various dates.)

Lieut.-Col. A. E. G. MacCallum relinquishes his commn. on account of ill-health contracted on active service, and is permitted to retain his rank; May 24.

Capt. H. Riddell relinquishes his commn. on account of ill-health contracted on active service, and is permitted to retain his rank; May 27.

Sec. Lieut. (actg. Lieut.) J. A. McMullan, M.B.E., relinquishes his commn. on account of ill-health, and is permitted to retain rank of Lieut.; May 23.

Lieut. (Hon. Capt.) F. Campbell (L'pool R., T.F.) relinquishes his commn. on account of ill-health contracted on active service; May 27.

The following Sec. Lieuts. relinquish their commns. on account of ill-health and are permitted to retain their rank:—A. D. Birkhead; May 8. J. H. Lester (contracted on active service); May 26.

The notification in the *Gazette* of May 23 concerning Capt. S. E. Neal is cancelled.

Medical Branch

Maj. A. W. Iredell to be Lieut.-Col.; May 16.

G. F. Marshall is granted a temp. commn. as Capt.; April 17.

E. A. Lumley is granted a temp. commn. as Capt.; May 19.

J. Fanning is granted a temp. commn. as Lieut.; May 19.

Transferred to the Unemployed List:—Capt. C. Webb; April 1. Capt. J. D. Bridger, Maj. R. R. Fasson, R.N.; May 14.

Dental Branch

I. M. Thomson is granted a temp. commn. as Capt.; July 15, 1918 (substituted for notification in the *London Gazette* of July 19, 1918).

Chaplains' Branch

The Rev. A. S. Bishop, Temp. Chaplain to the Forces, 4th Class, R.A.C.D. (Wesleyan), is granted a temp. commn. as Chaplain with the relative rank

of Capt., and is granted the relative rank of Maj. while employed as Assist. Principal Chaplain (Wesleyan); Jan. 1.

Memoranda

The following are granted the actg. ranks stated against their names, with effect from May 1:—

To be actg. Lieut.-Cols.:—Maj. F. F. Minchin, D.S.O., M.C., while specially employed; Maj. C. E. Maude, while specially employed.

To be actg. Maj.:—Capt. H. A. Tweedie, A.F.C., while specially employed; Capt. D. Cloete, M.C., while specially employed; Capt. W. H. Dolphin, while specially employed; Capt. W. P. Groves, while specially employed; Capt. E. A. de L. De Ville, while specially employed; Capt. L. P. Ferris-Scott, while specially employed.

To be actg. Capt.:—Lieut. L. J. Stuart, while specially employed; Lieut. H. Tilley, while specially employed; Lieut. R. Halley, D.F.C., while specially employed; Lieut. G. R. Travis, while specially employed; Lieut. P. Warburton, while specially employed; Lieut. W. J. Butler, A.F.C., while specially employed; Lieut. B. G. H. Keymer, D.F.C., while specially employed; Lieut. J. H. Robertson, while specially employed; Lieut. O. R. Gayford, D.F.C., while specially employed; Lieut. T. B. W. Spencer, while specially employed; Sec. Lieut. R. J. Bright, while specially employed; Sec. Lieut. A. W. Brittain, while specially employed; Sec. Lieut. J. H. Boyd, while specially employed; Sec. Lieut. R. R. Trout, while specially employed.

The following is granted the actg. rank stated against his name, with effect from May 26:

To be Lieut.-Col.:—Maj. F. W. Lucas, O.B.E., while specially employed. (Then follow the names of 232 Overseas Cadets who are granted temp. commissions as Sec. Lieuts.)

Flt. Cadet 176666 M. J. O'C. Hefferman (since killed) is granted an hon. commn. as Sec. Lieut.; Jan. 29.

The following relinquish their commns. on ceasing to be employed:—Col. H. D. Briggs, C.M.G. (Capt., R.N.), Lieut.-Col. R. A. Wilson, D.S.O. (Comdr., R.N.); May 15.

(Then follow the names of 11 officers who are transfd. to the Unemployed List under various dates.)

Capt. M. H. Stephens relinquishes his commn. on account of ill-health caused by wounds, and is permitted to retain his rank; May 28.

London Gazette, June 10

The following temporary appointments are made:—

Air Secretary.—Lieut.-Col. A. J. L. Scott, M.C., A.F.C.; May 22, and to be actg. Col. while so employed.

Staff Officers, 3rd Class (P).—Capt. S. Henderson; May 31, vice Capt. F. V. Andreini.

Staff Officers, 4th Class (T).—Sec. Lieut. P. E. Stubbs; April 1, 1918, and to be actg. Lieut. till April 30. Sec. Lieut. D. J. Walker; April 8, 1918, and to be actg. Lieut. till April 30.

Staff Officers, 1st Class (Q).—Lieut.-Col. F. H. Kirby, V.C., O.B.E., D.C.M.; May 1, relinquishing the appointment of Group Comdr.

Staff Officers, 3rd Class (P).—Lieut. (actg. Capt.) T. Gibson; April 10, and to retain the actg. rank of Capt. until April 30. (T).—Sec. Lieut. (Hon. Lieut.) G. A. Tilly; Feb. 9, and to be actg. Capt. until April 30, vice Sec. Lieut. (actg. Capt.) A. B. Staples (substituted for the notification concerning this officer which appeared in the Gazette of May 20).

Flying Branch

Capt. T. R. Spence to be graded for purposes of pay and allowances of Maj. (K.B.) whilst employed as Maj.; May 1.

Capt. S. E. Taylor, D.S.C., to be graded for purposes of pay and allowances as Lieut. (A'ship); May 1.

Lieut. (actg. Capt.) E. Burney, M.C., to be Lieut. (A.), from (S.O.); April 9, and to retain the actg. rank of Capt. whilst employed as Capt. (A.), till April 30 (substituted for the notification in the Gazette of April 29).

Sec. Lieut. R. P. Bourne to be Lieut.; May 4.

Sec. Lieut. G. J. Gawthorne, D.S.M., to be Sec. Lieut. (K.B.), from (T.), and to be actg. Lieut. whilst employed as Lieut. (K.B.), from June 30, 1918, to April 30 (substituted for the notifications concerning this officer which appeared in the Gazettes of Nov. 8, 1918, and March 14).

A. Drummond (Temp. Sec. Lieut., Rif. Bde.) is granted a temp. commn. as Sec. Lieut. (A.); Oct. 29, 1918.

The following relinquish their commns. on ceasing to be employed:—Lieut. C. J. B. Fox (Sec. Lieut., D.L.I.); July 13, 1918. Lieut. H. L. C. Aked (Lieut., W. Yorks. R.); Jan. 27. Sec. Lieut. (actg. Capt.) V. M. Lavery (Capt., Can. Engrs.), Sec. Lieut. T. A. Spradbury (Sec. Lieut., R. Warwicks. R.); Feb. 4. Capt. J. Clisdal, M.C. (Capt., Spec. List); April 30. Lieut. H. V. Acland (Lieut., Brit. Columbia R.); May 20. Lieut. M. F. Farquharson-Roberts (Lieut., R.A.S.C.), Sec. Lieut. J. B. Martin (Lieut., Brit. Columbia R.); May 27.

(Then follow the names of 72 officers who are transfd. to the Unemployed List under various dates. We regret that owing to great pressure on our space it is impossible to reprint this portion of the list.—Ed.)

Lieut. A. K. Prentice relinquishes his commn. on account of ill-health contracted on active service, and is permitted to retain the rank of Lieut.; April 30 (substituted for notification in Gazette Jan. 7).

The following Sec. Lieuts. relinquish their commns. on account of ill-health, and are permitted to retain their rank:—G. J. Ellesmere (contracted on active service); May 20. T. H. A. Vivers; May 21. C. G. F. Carver, E. Conning, W. Hodder; May 30.

The Christian name of Sec. Lieut. John Sellers is as now described, and not as stated in Gazette, May 28.

The notification in Gazette of March 11 concerning Sec. Lieut. G. M. Hughey is cancelled.

The notification in Gazette of May 23 concerning Lieut. J. O. Chantler is cancelled.

The notification in Gazette of May 30 concerning Sec. Lieut. K. C. Whitwell is cancelled.

Administrative Branch

Capt. T. L. Stevens to be actg. Maj. whilst employed as Maj. (from April 14 to 30).

Sec. Lieuts. to be Sec. Lieuts., from (A):—C. R. Roushorne; May 9. G. E. Watson; May 12.

Sec. Lieuts. to be Sec. Lieuts., from (O):—H. T. Ecob; May 8. R. W. Silk; May 12.

Sec. Lieut. R. C. E. Vernede to be Sec. Lieut., from (K.B.); April 17.

The following relinquish their commns. on ceasing to be employed:—Lieut. (Hon. Capt.) (actg. Capt.) D. A. G. Dallas (Capt., Ind. Army); Feb. 1. Sec. Lieut. (actg. Lieut.) C. G. Campbell; Feb. 21. Sec. Lieut. T. A. P. Proctor (Sec. Lieut., R. Welsh Fus.); April 20. Lieut. J. A. S. Trydell (Lieut., K.O.Y.L.I.); May 28. Lieut. M. G. Sykes; May 29.

(Then follow the names of 21 officers who are transfd. to the Unemployed List under various dates.)

Capt. G. R. Page (Lond. R., T.F.) relinquishes his commn. on account of ill-health caused by wounds; May 16.

Lieut. J. S. Bowler relinquishes his commn. on account of ill-health, and is granted the rank of Capt.; May 30.

Sec. Lieut. J. Jaffray (Gord. High.) relinquishes his commn. on account of ill-health contracted on active service, and is permitted to retain his rank; May 27.

Sec. Lieut. G. A. Beith is removed the Service, his Majesty having no further occasion for his services as an officer; May 17 (substituted for the notification in the Gazette of May 16).

The notification in the Gazette of April 11 concerning Lieut. F. W. Dogherly is cancelled.

The notification in the Gazette of May 13, concerning Lieut. S. H. H. Heaver is cancelled.

Technical Branch

Capt. B. Thomson to be Capt., Grade (A.), from Grade (B.); March 10. Lieut. F. N. Trinder to be Lieut., Grade (A.), from Grade (B); Nov. 1, 1918.

Lieut. E. Porter, D.C.M., to be Lieut., Grade (B.), from (Ad.); May 29.

Sec. Lieuts. to be Lieuts., without pay and allowances of that rank:—W. E. Westwood; Feb. 19. R. J. Costigan; Feb. 26. B. A. Gunner; April 2.

Sec. Lieuts. to be Sec. Lieuts., Grade (A.), from (A.):—E. Barker; March 1. W. C. Garner; April 23.

Sec. Lieut. T. E. H. P. Kennedy to be Sec. Lieut., Grade (A.), from (A. and S.); Feb. 22.

Capt. F. R. Hardie (Lieut., 3rd Hussars) relinquishes his commn. on ceasing to be employed; May 28.

(Then follow the names of 27 officers who are transfd. to the Unemployed List under various dates.)

Sec. Lieut. B. E. D. Pratt relinquishes his commn. on account of ill-health, and is permitted to retain the rank of Lieut.; May 30.

The rank of Capt. L. Crooks is as now described and not as in Gazette May 27.

Medical Branch

C. T. O'Neill is granted a temp. commn. as Lieut.; June 2.

Chaplains' Branch

The Rev. J. W. G. Pearse is transfd. to the Unemployed List; May 27. (Then follow the names of 250 overseas cadets granted temp. commns. as Sec. Lieuts.)

London Gazette, June 13

The following temporary appointments are made:—

Staff Officer, 1st Class.—(Air).—Maj. F. K. Haskins, D.S.O.; May 26, and to be actg. Lieut.-Col. whilst so employed.

Staff Officers, 3rd Class.—(Air).—Lieut. (actg. Capt.) J. H. Truscott; Feb. 11, and to retain the actg. rank of Capt. till April 30. (Q).—Capt. A. Smith; June 10, 1918.

Staff Officer, 4th Class.—(Air).—Lieut. A. V. Burbury, M.C.; May 27.

Flying Branch

Capt. W. G. Pigott to be graded for purposes of pay and allowances of Maj. (K.B.) whilst employed as Maj.; May 1.

Lieuts. to be graded for purposes of pay and allowances of Capts. whilst employed as Capts.:—C. Chrimmes (A. and S.), H. Copley (K.B.); May 1.

Sec. Lieut. G. Roberts (late Gen. List, R.F.C., on prob.) is confirmed in rank as Sec. Lieut. (A.); July 7, 1918 (substituted for the notification in Gazette of Nov. 26, 1918).

G. M. Angier (Lieut., R. Suss. R., T.F.) is granted a temp. commn. as Sec. Lieut. (A.); Nov. 6, 1918, and to be Hon. Lieut.

A. Cox (Lieut., R.W. Fus.) is granted a temp. commn. as Sec. Lieut. (O.) Sept. 11, 1918, and to be Hon. Lieut.

Flight Cdt. B. Loutitt is granted a temp. commn. as Sec. Lieut. (A. and S.); Aug. 26, 1918 (substituted for the notification in Gazette of Sept. 10, 1918).

The following relinquish their commns. on ceasing to be employed:—

Lieut.-Col. J. W. Seddon (Lieut.-Comdr., R.N.); June 15, 1918. Sec. Lieut. E. R. A. Biggs (H.L.I.); Aug. 10, 1918. Sec. Lieut. L. W. Hopkins (Capt., E. Ont. R.); Nov. 18, 1918. Lieut. R. G. Smith (Lieut., Manitoba R.); Dec. 9, 1918. Sec. Lieut. G. Hill (North'd Fus.); March 27. Lieut. H. H. Cotton (Lieut., actg. Capt., Quebec R.); March 28. Lieut. H. V. Brisbin (Lieut., 1st Cent. Ont. R.); April 24. Lieut.-Col. R. B. Davies, V.C., D.S.O. (Lieut.-Comdr., R.N.); May 7. Sec. Lieut. (Hon. Lieut.) C. R. Fraser (Lieut., Can. Engrs.); May 12. Sec. Lieut. (Hon. Lieut.) A. A. Creswell (Lieut., Sask. R.); Lieut. A. C. Holmes (Lieut., Newfoundland R.); May 21.

Maj. R. C. Hayes, O.B.E. (Lieut.-Comdr., R.N.); May 30. Lieut. J. K. Parker (Lieut., R. Scots. Fus.); June 14.

(Then follow the names of 109 officers who are transfd. to the Unemployed List under various dates. We regret that owing to great pressure on our space, it is impossible to reprint this portion of the list.—Ed.)

The following Lieuts. relinquish their commns. on account of ill-health, and are permitted to retain their rank:—S. V. R. Lewis (caused by wounds); April 24. J. W. Lockhart (caused by wounds); May 9. F. L. Gall; May 20 (substituted for notification in Gazette Jan. 24). A. H. Gitsam (contracted on active service); May 30. K. J. Isaac (caused by wounds); May 31.

R. J. G. Stewart (contracted on active service); June 4.

The following Sec. Lieuts. relinquish their commns. on account of ill-health, and are permitted to retain their rank:—L. L. De Jean; May 31. W. P. Small; June 4.

Sec. Lieut. R. R. Truscott relinquishes his commn., being physically unsuited for the duties of Pilot or Observer; Jan. 6 (substituted for notification in Gazette, Nov. 5, 1918).

The notification in Gazette of April 11 concerning Lieut. L. G. Bullock is cancelled.

The notification in Gazette of May 9 concerning Lieut. F. H. Prime is cancelled.

Administrative Branch

T. Gibson (Temp. Lieut., Dorset R.) is granted a temp. commn. as Lieut., and to be actg. Capt. while employed as Capt., from Jan. 14 to April 30.

Lieut. N. F. Bardell to be Lieut., from (K.B.), and to be graded for purposes of pay and allowances of Capt. whilst employed as Capt.; May 1.

Sec. Lieuts. to be graded for purposes of pay and allowances of Capts. while employed as Capts.:—H. Gambier; May 1. (Hon. Capt.) A. N. Wyatt; May 30.

The following relinquish their commns. on ceasing to be employed:—Lieut. K. Owen (Lieut., E. Lancs. R.); Feb. 21. Lieut. M. O'Loughlin (Lieut., Conn. Rangers), S.R.; May 29.

(Then follow the names of 21 officers who are transfd. to the Unemployed List under various dates.)

Lieut. (Hon. Capt.) G. J. Elliott relinquishes his commn. on account of ill-health, and is granted the rank of Capt.; May 30.

Lieut. W. Nuttall relinquishes his commn. on account of ill-health contracted on active service, and is permitted to retain his rank; May 30.

Sec. Lieut. N. W. Seyler relinquishes his commn. on account of ill-health, and is permitted to retain his rank; June 4.

The notification in the Gazette of April 4 concerning Lieut. J. R. Fuller is cancelled.

Technical Branch

Cpts. to be graded for purposes of pay and allowances of Majs., Grade (B.), whilst employed as Majs.:—F. W. Mansell, H. A. Whelen; May 1.

Lieut. R. B. Stephenson to be graded for purposes of pay and allowances of Maj., Grade (A.) whilst employed as Maj.; May 1 (substituted for the notification in Gazette May 27).

To be graded for purposes of pay and allowances of Capts., Grade (A.),

IMPORTS AND EXPORTS, 1918-1919.

AEROPLANES, airships, balloons and parts thereof (not shown separately before 1910). For 1910 and 1911 figures see "FLIGHT" for January 25, 1912; for 1912 and 1913, see "FLIGHT" for January 17, 1914; for 1914, see "FLIGHT" for January 15, 1915; for 1915, see "FLIGHT" for January 13, 1916; for 1916, see "FLIGHT" for January 11, 1917; for 1917, see "FLIGHT" for January 24, 1918; and for 1918, see "FLIGHT" for January 16, 1919.

	Imports.		Exports.		Re-exportation.	
	1918.	1919.	1918.	1919.	1918.	1919.
	£	£	£	£	£	£
January ...	49,402	555,989	24,765	57,571	—	—
February ...	51,941	453,822	13,545	57,972	—	—
March ...	47,930	704,424	11,451	72,716	1,000	400
April ...	33,342	97,662	10,815	25,433	—	—
May ...	942,866	136,631	67,224	38,428	—	—
	1,125,481	1,948,528	127,800	252,120	1,000	400

NEW COMPANIES REGISTERED

AERO SHEET METAL AND ENGINEERING WORKS, LTD.—Capital £10,000, in £1 shares. Acquiring business carried on at 137, High Road, Chiswick, under similar title. First directors: P. G. Brown and N. Malevez.

ASTRAL MANUFACTURING CO., LTD., 59, Kedleston Road, Derby. —Capital £10,000, in £1 shares (2,000 preference). Cabinet makers, manufacturers of and dealers in aeroplanes and parts, etc. First directors: A. S. Moore and E. J. Callaghan.

AVIATION TRANSPORT INTERNATIONALE, LTD., 15, Duke Street, Adelphi, W.C.—Capital £1,000, in £1 shares. Manufacturers of and dealers in aircraft (including flying boats), operators of postal, passenger and freight services in the United Kingdom and elsewhere, etc. T. F. Cowan, permanent governing director.

BISHOP-BARKER AVIATION CO., LTD.—Capital £10,000, in £1 shares (5,000 participating preference). Objects: To carry on in the United Kingdom, the U.S.A., France, Canada and elsewhere the business of carriers by air, flying school owners, etc. First directors: Lieut.-Col. W. A. Bishop, V.C., etc., Lieut.-Col. W. G. Barker, V.C., etc., and Capt. R. L. Lott. Solicitors, Simmons and Simmons, 18, Finch Lane, E.C.

KNOX AND CO., LTD., 180, Piccadilly, W. (1).—Capital £2,000, in £1 shares. Manufacturers and dealers in motor cars, internal combustion engines, etc. Directors: H. Knox and T. R. Kitchen.

LARKIN-SOPWITH AVIATION CO. OF AUSTRALASIA, LTD., 4, St. Mary Axe, E.C.—Capital £31,500, in 30,000 preferred ordinary shares of £1 each and 60,000 deferred ordinary shares of 6d. each. First directors: H. B. Larkin, R. J. Turner and J. T. Leete.

RENDLE, BLANCHARD AND CO., LTD., 5, Victoria Street, S.W. (1).—Capital £3,000, in £1 shares. Manufacturers of internal combustion and other engines, and dealers in motor cars. Directors: W. B. Rendle, L. W. Blanchard, and A. G. Edwards.

REPETITION ENGINEERING CO., LTD., 59, Mark Lane, E.C.—Capital £1,000, in £1 shares. Aircraft and general engineers, etc. Directors: W. Bennison, A. G. E. Spanforth, and R. C. Hagger.

PUBLICATIONS RECEIVED

Prospectus of the First Aircraft Exhibition, Amsterdam: July-August, 1919; British Section. London: J. Van der Steen, Trafalgar Buildings, Trafalgar Square, W.C. 2.

"To Obtain 47 Efficient Hours." The Pulsynetic Time Mechanism and Apparatus. Gent and Co., Ltd., Faraday Works, Leicester.

High Adventure: A Narrative of Air Fighting in France. By James Norman Hall. London: Constable and Co., Ltd. Price 6s. net.

The "Shell" That Hit Germany Hardest. By P. G. A. Smith. The "Shell" Marketing Co., Ltd., 39-41, Parker Street, Kingsway, W.C. 2.

The Aerial Register and Gazette. Edited and compiled by A. J. Swinton, F.R.G.S., and J. D. Atkinson, F.R.G.S. London: The Aeroplane and General Publishing Co., Ltd., Carey Street, W.C. 2. Price 5s. net.

Reconstruction Problems, 27. Officers' Guide to Civil Careers. London: H.M. Stationery Office. Price 2d.

Electricity and the Motor Car. By F. H. Hutton. London: Iliffe and Sons, Ltd., 20, Tudor Street, E.C. 4. Price 4s. 6d. net.

How to Fly. By A. Frederick Collins. London: D. Appleton and Co., 25, Bedford Street, W.C. 2. Price 5s. net.

Air Navigation: Notes and Examples. By Instructor Capt. S. F. Card, B.A., R.N. London: Edward Arnold, 41-43, Maddox Street, W. Price 10s. 6d. net.

The Way to Fly. By "Avion." London: C. Arthur Pearson, Ltd. Price 3s. 6d. net.

Catalogues

Alco Acetylene Gas Tips and Burners. American Lava Co., Chattanooga, Tennessee, U.S.A.

"A.W.P." Electrodes for Electric Arc Welding. Alloy Welding Processes, Ltd., 149, Leadenhall Street, E.C.

Cambridge School of Flying, 1919. The Cambridge School of Flying and Aerodrome Co., Ltd., 2, Downing Street, Cambridge.

Dawnay's Hangars. Archibald D. Dawnay and Sons, Ltd., Steelworks Road, Battersea, S.W. 11.

Aeronautical Specifications Published

Abbreviations:—cyl.=cylinder; I.C.=internal combustion; m.=motors.

APPLIED FOR IN 1916

The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

Published June 19, 1919

- 1,181. SOC. ANON. SPAD POUR L'AVIATION ET SES DERIVES. Frames for aircraft. (126,977.)
- 2,653. E. J. J. SALMON. Aeroplanes having side propellers. (126,979.)
- 2,654. E. J. J. SALMON. Cells or compartments of aeroplanes. (126,980.)
- 2,655. E. J. J. SALMON. Landing frame for aeroplanes. (126,981.)
- 10,793. SOC. NAUTON FRERES ET DE MARSAC and T. F. TESSE. Coating composition for aeroplane cloths. (126,989.)
- 13,057 and 13,058. SOC. ANON. ETAB. NIEUFORT. Aeroplanes. (126,995 and 126,996.)
- 14,736. R. ARNOUX. Aeroplanes. (126,998.)
- 16,511. SOC. ANON. ASTRA and H. KAPFERER. Airships of the Torres type. (127,000.)
- 18,634. L. BLERIOY. Propulsion of aeroplanes, etc. (127,005.)

APPLIED FOR IN 1917

The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

Published June 19, 1919.

- 2,114. J. G. HOPPER. Luminous indicator for night landing. (127,009.)
- 2,230 and 2,231. SOC. CLERGET, BLIN ET CIE. Hoods of aircraft engines. (127,010 and 127,011.)
- 2,709. SOC. DES MOTEURS GNOME ET RHONE. Feeding fuel in I.C. engines having rotating cylinders. (127,016.)
- 3132 and 3133. P. PAULHAN and H. J. L. M. DE LA CHEVARDIERE DE LA GRANDVILLE. Propellers. (127,019 and 127,020.)
- 3,726. G. H. THOMAS, G. DE HAVILLAND and H. R. MORGAN. Controlling firing-mechanism of machine gun on aircraft. (127,021.)
- 4,062. S. E. SAUNDERS. Fuselages of aircraft. (127,029.)
- 4,104. A. H. POLLEN and H. F. LANDSTAD. Apparatus for determining and correcting course of aircraft. (127,032.)
- 4,119. MARTINSYDE, LTD., H. P. MARTIN and O. D. LUCAS. Control of machine guns, etc. (127,033.)
- 4,195. E. YOUNG and BLACKBURN AEROPLANE AND MOTOR CO. Adjusting tension members of aircraft. (127,035.)
- 4,243. G. H. THOMAS and R. F. POWER. Indicating altitude of clouds, or position of aerodromes, signalling, etc. (127,041.)
- 4,404. F. H. PAGE. Support for bombs, etc., on aircraft. (127,048.)

APPLIED FOR IN 1918

The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

Published June 12, 1919.

- 8,810. F. J. J. GIBBONS. Appliance for dropping objects from aircraft. (126,827.)
- 9,762. JEFFERY MANUFACTURING CO. Rotary air motors. (126,841.)
- 11,300. BLACKBURN AEROPLANE AND MOTOR CO. and H. BOOTH. Control of aircraft. (126,858.)
- 11,521. A. MORRIS. Level or inclinometer. (126,860.)
- 13,293. S. E. SAUNDERS. Hollow spars for aircraft construction. (126,872.)
- 13,386. B. A. DUNCAN. Girder-like parts of aircraft. (126,875.)
- 19,637. H. PALSON. Aircraft. (126,909.)
- 20,138. P. DE LESSEPS. Control of ailerons. (126,911.)
- 3,176. L. C. HOPE. Boats or floats for aircraft. (127,067.)
- 14,794. J. RASCHLE-FREI. Propeller for aircraft, etc. (119,463.)

APPLIED FOR IN 1919

The numbers in brackets are those under which the Specifications will be printed and abridged, etc.

Published June 12, 1919.

- 7,487. VICKERS, LTD., and Sir J. McKECHNIE. Cars for aerial machines. (126,934.)

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